

Romuald Houdré

Integral publication list Peer reviewed articles, books, conferences and patents

2013

- 416 N. Descharmes, U. Dharanipathy, M. Tonin, Z. Diao, and R. Houdré, "Resonant optical trapping and back-action effects in hollow photonic crystal cavities" *Lasers and Electro-Optics and European Quantum Electronics Conference (CLEO Europe - EQEC 2013)*, München, Germany, 2013 (IEEE Conf. Proc.).
- 415 N. Descharmes, U. Dharanipathy, Z. Diao, M. Tonin, and R. Houdré, "Experimental demonstration of resonant optical trapping and back-action effects in a hollow photonic crystal cavity" *Lasers and Electro-Optics and Quantum electronics and Laser Science Conference (CLEO/QELS 2013)*, San Jose, USA, 2013 (IEEE Conf. Proc.).
- 414 M. Minkov, U. P. Dharanipathy, R. Houdré, and V. Savona, "Statistics of the disorder-induced losses of high-Q photonic crystal cavities" *Opt. Express* **21**, 28233-28245 (2013).
- 413 N. Vico Triviño, G. Rossbach, U. Dharanipathy, J. F. Carlin, A. Castiglia, Z. Diao, R. Butté, R. Houdré, and N. Grandjean, "Integrated photonics on silicon with wide bandgap GaN semiconductor" *International Nano-Optoelectronics Workshop (iNOW)*, Cargèse, Corsica, France, 2013.
- 412 D. Ballarini, M. De Giorgi, E. Cancellieri, R. Houdré, E. Giacobino, R. Cingolani, A. Bramati, G. Gigli, and D. Sanvitto, "All-optical polariton transistor" *Nature Communications* **4** (2013).
- 411 N. Descharmes, U. P. Dharanipathy, Z. Diao, M. Tonin, and R. Houdré, "Single particle detection, manipulation and analysis with resonant optical trapping in photonic crystals" *Lab on a Chip* **13**, 3268-3274 (2013).
- 410 N. Le Thomas, D. T. L. Alexander, M. Cantoni, W. Sigle, R. Houdré, and C. Hebert, "Imaging of high-Q cavity optical modes by electron energy-loss microscopy" *Phys. Rev. B* **87**, 155314 (2013).
- 409 Z. Diao, C. Bonzon, G. Scalari, M. Beck, J. Faist, and R. Houdré, "Continuous-wave vertically emitting photonic crystal terahertz laser" *Laser Photonics Rev.* **7**, L45-L50 (2013).
- 408 N. Descharmes, U. Dharanipathy, Z. Diao, M. Tonin, and R. Houdré, "Observation of Backaction and Self-Induced Trapping in a Planar Hollow Photonic Crystal Cavity," *Phys. Rev. Lett.* **110**, 123601 (2013).
- 407 N. V. Triviño, U. Dharanipathy, J. F. Carlin, Z. Diao, R. Houdré, and N. Grandjean, "Integrated photonics on silicon with wide bandgap GaN semiconductor," *Appl. Phys. Lett.* **102**, 081120 (2013).
- 406 N. Descharmes, U. Dharanipathy, Z. Diao, M. Tonin, and R. Houdré, "Optical trapping and back-actions effects in hollow photonic crystal cavities" *Progress In Electromagnetics Research Symposium (PIERS 2013)*, Stockholm, Sweden, 2013, invited communication.
- 405 N. Descharmes, U. Dharanipathy, Z. Diao, M. Tonin, and R. Houdré, "Resonant optical trapping and back-action effects in a hollow photonic crystal cavity," *15th International Conference on Transparent Optical Networks (ICTON 2013)*, Carthagena, Spain, 2013 (ICTON Tech. Dig.), invited communication.

404 N. Vico Triviño, U. Dharanipathy, J. F. Carlin, Z. Diao, R. Houdré, and N. Grandjean, "Integrated photonics on silicon with wide bandgap GaN semiconductor" *40th International Symposium on compound Semiconductors (ISCS 2013)*, Kobe, Japan, 2013.

403 N. Descharmes, U. Dharanipathy, Z. Diao, M. Tonin, and R. Houdré, "Optical trapping and backaction in hollow photonic crystal cavities," *SPIE Optics + Photonics*, San Diego, USA, 2013, invited communication.

402 N. Descharmes, U. Dharanipathy, Z. Diao, M. Tonin, and R. Houdré, "Self-trapping and back-action effects in hollow photonic crystal cavity optical trap," *SPIE Photonics West 2013*, San Francisco, USA, 2013.

2012

401 U. Dharanipathy, N. V. Triviño, C. Yan, Z. Diao, J. F. Carlin, N. Grandjean, and R. Houdré, "Near-infrared characterization of gallium nitride photonic-crystal waveguides and cavities," *Opt. Lett.* **37**, 4588-4590 (2012).

400. N. Vico Triviño, G. Rossbach, U. Dharanipathy, J. Levrat, A. Castiglia, J. F. Carlin, K. A. Atlasov, R. Butté, R. Houdré, and N. Grandjean, "High quality factor two dimensional GaN photonic crystal cavity membranes grown on silicon substrate," *Appl. Phys. Lett.* **100**, 071103 (2012).

399. N. Descharmes, U. Dharanipathy, Z. Diao, and R. Houdré, "Microfluidic integrated hollow photonic crystal cavities for single particle and resonant field interaction," *Lasers and Electro-Optics and Quantum electronics and Laser Science Conference. (CLEO/QELS 2012)*, San Jose, USA, 2012 (IEEE Conf. Proc.).

398. Z. Diao, C. Bonzon, G. Scalari, M. Beck, J. Faist, and R. Houdré, "Surface emitting Terahertz Photonic Crystal Quantum Cascade Laser realized by Bragg boundary condition," *Lasers and Electro-Optics and Quantum electronics and Laser Science Conference. (CLEO/QELS 2012)*, San Jose, USA, 2012 (IEEE Conf. Proc.).

397. N. Vico Triviño, G. Rossbach, U. Dharanipathy, J. Levrat, A. Castiglia, J. F. Carlin, K. A. Atlasov, R. Butté, R. Houdré, and N. Grandjean, "High Quality Factor 2D GaN Photonic Crystal Cavity Membranes grown on Silicon," *10th International Symposium on Photonic and Electromagnetic Crystal Structures (PECS X)*, Santa Fe, USA, 2012.

396. U. Dharanipathy, N. Vico Triviño, Z. Diao, N. Grandjean, and R. Houdré, "Fabrication and Near-IR Measurement of GaN Photonic Crystal Membranes: Wires, Waveguides and Cavities," *10th International Symposium on Photonic and Electromagnetic Crystal Structures (PECS X)*, Santa Fe, USA, 2012.

395. Z. Diao, C. Bonzon, G. Scalari, M. Beck, J. Faist, and R. Houdré, "Surface Emitting Terahertz Photonic Crystal Quantum Cascade Laser Realized by Bragg Boundary Condition," *10th International Symposium on Photonic and Electromagnetic Crystal Structures (PECS X)*, Santa Fe, USA, 2012.

394. N. Descharmes, U. Dharanipathy, Z. Diao, and R. Houdré, "Single particle detection and self-trapping in microfluidic integrated hollow photonic crystal cavities," *10th International Symposium on Photonic and Electromagnetic Crystal Structures (PECS X)*, Santa Fe, USA, 2012.

393. N. Descharmes, U. Dharanipathy, Z. Diao, M. Tonin, and R. Houdré, "Single particle detection and self-trapping in hollow photonic crystal cavities integrated in a microfluidic environment," *14th International Conference on Transparent Optical Networks (ICTON 2012)*, Coventry, UK, 2012 (ICTON Tech. Dig.), invited communication.

392. C. Bonzon, Z. Diao, G. Scalari, M. Beck, J. Faist, and R. Houdré, "Terahertz Photonic Crystal Quantum Cascade Laser Coupled to a Second Order Bragg Extractor," *International Quantum Cascade Lasers School & Workshop (IQCLSW 2012)*, Baden near Vienna, Austria, 2012.
391. U. Dharanipathy, N. Vico Triviño, J. F. Carlin, N. Grandjean, and R. Houdré, "Dispersion and propagation properties of Photonic Crystal waveguide modes in Gallium Nitride membranes and suspended nanowires," *31st International Conference on the Physics of Semiconductors (ICPS)*, Zürich, Switzerland, 2012.
390. M. Minkov, V. Savona, U. Dharanipathy, and R. Houdré, "What determines the Q-factor of high-Q photonic crystal cavities," *31st International Conference on the Physics of Semiconductors (ICPS)*, Zürich, Switzerland, 2012.
389. N. Deschermes, U. Dharanipathy, Z. Diao, M. Tonin, and R. Houdré, "Optical sensing of individual nanoparticles in silicon-based two-dimensional hollow photonic crystal cavities," *31st International Conference on the Physics of Semiconductors (ICPS)*, Zürich, Switzerland, 2012.
388. N. Vico Triviño, G. Rossbach, U. Dharanipathy, J. Levrat, A. Castiglia, J. F. Carlin, K. A. Atlasov, R. Butté, R. Houdré, and N. Grandjean, "High Quality Factor 2D GaN Photonic Crystal Cavity Membranes grown on Silicon," *31st International Conference on the Physics of Semiconductors (ICPS)*, Zürich, Switzerland, 2012.
387. C. Bonzon, Z. Diao, G. Scalari, M. Beck, J. Faist, and R. Houdré, "Terahertz Photonic Crystal Quantum Cascade Laser Coupled to a Second Order Bragg Extractor," *31st International Conference on the Physics of Semiconductors (ICPS)*, Zürich, Switzerland, 2012.

2011

386. D. Sanvitto, S. Pigeon, A. Amo, D. Ballarini, M. De Giorgi, I. Carusotto, R. Hivet, F. Pisanello, V. G. Sala, P. S. S. Guimaraes, R. Houdré, E. Giacobino, C. Ciuti, A. Bramati, and G. Gigli, "All-optical control of the quantum flow of a polariton condensate," *Nature Photonics* **5**, 610-614 (2011).
385. N. Le Thomas, Z. Diao, H. Zhang, and R. Houdré, "Statistical analysis of subnanometer residual disorder in photonic crystal waveguides: Correlation between slow light properties and structural properties," *J. Vac. Sci. Technol. B* **29**, 051601 (2011).
384. N. Le Thomas, and R. Houdré, "Inhibited emission of electromagnetic modes confined in subwavelength cavities," *Phys. Rev. B* **84**, 035320 (2011).
383. A. Amo, S. Pigeon, D. Sanvitto, V. G. Sala, R. Hivet, I. Carusotto, F. Pisanello, G. Lemenager, R. Houdré, E. Giacobino, C. Ciuti, and A. Bramati, "Polariton Superfluids Reveal Quantum Hydrodynamic Solitons," *Science* **332**, 1167-1170 (2011).
382. H. Zhang, G. Scalari, M. Beck, J. Faist, and R. Houdré, "Complex-coupled photonic crystal THz lasers with independent loss and refractive index modulation," *Opt. Express* **19**, 10707-10713 (2011).
381. N. Le Thomas, and R. Houdré, "Contrôle dans le champ lointain du facteur de qualité de cavités à cristaux photoniques planaires," *Optique Marseille*, Marseille, France, 2011, invited communication.
380. N. Le Thomas, and R. Houdré, "Inhibition of the emission of electromagnetic modes of photonic crystal cavities with a top mirror," *13th International Conference on Transparent Optical Networks (ICTON 2011)*, Stockholm, Sweden, 2011 (ICTON Tech. Dig.), invited communication.
379. D. Sanvitto, M. De Giorgi, D. Ballarini, A. Amo, G. Tosi, F. Marchetti, M. H. Szymńska, S. Pigeon, V. G. Sala, E. Cancellieri, I. Carusotto, R. Hivet, F. Pisanello, G. Lemenager, R. Houdré, A. Lemaître, J. Bloch, E. Giacobino, C. Tejedor, L. Viña, C. Ciuti, A. Bramati, and G. Gigli, "Hydrodynamical phenomena in polariton condensates," *Lasers and Electro-Optics and European*

Quantum Electronics Conference (CLEO Europe - EQEC 2011), München, Germany, 2011 (IEEE Conf. Proc.), invited communication.

378. U. Dharanipathy, and R. Houdré, "Numerical modelling of optical trapping in hollow photonic crystal cavities," *Opt. Quantum Electron.* **44**, 161-167 (2012), *11th International Conference on Numerical Simulation of Optoelectronic Devices in Optical and Quantum Electronics (NUSOD)*, Rome, Italy, 2011.

377. N. Descharmes, U. Dharanipathy, Z. L. Diao, N. Le Thomas, and R. Houdré, "Single particle induced resonance frequency shift in a hollow photonic crystal cavity," *Photonics Prague*, Prague, Czech republic, 2011.

376. Z. L. Diao, G. Scalari, J. Faist, and R. Houdré, "Surface emitting terahertz photonic crystal quantum cascade laser realized by Bragg boundary condition," *2nd EOS Topical Meeting on Lasers (ETML'11)*, Capri, Italy, 2011.

2010

375. A. Amo, J. Lefrère, C. Adrados, E. Giacobino, A. Bramati, D. Sanvitto, F. P. Laussy, D. Ballarini, E. del Valle, M. D. Martin, C. Tejedor, L. Viña, S. Pigeon, C. Ciuti, I. Carusotto, R. Houdré, A. Lemaître, J. Bloch, D. N. Krizhanovskii, and M. S. Skolnick, "Superfluidity in polariton condensates," *J. Phys. Conf. Ser.* **210**, 012060 (2010), *11th International Conference on Optics of Excitons in Confined Systems (OECS11)*, Madrid, Spain, 2009, invited communication.

374. N. Le Thomas, and R. Houdré, "Group velocity and energy transport velocity near the band edge of a disordered coupled cavity waveguide: an analytical approach," *J. Opt. Soc. Am. B* **27**, 2095-2101 (2010).

373. H. Zhang, G. Scalari, J. Faist, L. A. Dunbar, and R. Houdré, "Design and fabrication technology for high performance electrical pumped terahertz photonic crystal band edge lasers with complete photonic band gap," *J. Appl. Phys.* **108**, 093104 (2010).

372. C. Adrados, A. Amo, T. C. H. Liew, R. Hivet, R. Houdré, E. Giacobino, A. V. Kavokin, and A. Bramati, "Spin Rings in Bistable Planar Semiconductor Microcavities," *Phys. Rev. Lett.* **105**, 216403 (2010).

371. A. Amo, S. Pigeon, C. Adrados, J. Lefrère, C. Ciuti, I. Carusotto, R. Houdré, A. Bramati, and E. Giacobino, "Quantum fluid properties of polaritons in semiconductor microcavities," *J. Mod. Opt.* **57**, 1900-1907 (2010).

370. J. Jágerská, H. Zhang, Z. L. Diao, N. Le Thomas, and R. Houdré, "Refractive index sensing with an air-slot photonic crystal nanocavity," *Opt. Lett.* **35**, 2523-2525 (2010).

369. A. Amo, S. Pigeon, C. Adrados, R. Houdré, E. Giacobino, C. Ciuti, and A. Bramati, "Light engineering of the polariton landscape in semiconductor microcavities," *Phys. Rev. B* **82**, 081301 (2010).

368. A. Amo, T. C. H. Liew, C. Adrados, R. Houdré, E. Giacobino, A. V. Kavokin, and A. Bramati, "Exciton-polariton spin switches," *Nature Photonics* **4**, 361-366 (2010).

367. N. Le Thomas, H. Zhang, J. Jágerská, and R. Houdré, "Numerical challenges posed by experimental investigations of the slow light regime in photonic crystal waveguides," *Photonics North*, Niagara Falls, Canada, 2010, invited communication.

366. J. Jágerská, H. Zhang, Z. L. Diao, N. Le Thomas, and R. Houdré, "Refractive Index Gas Sensing in a Hollow Photonic Crystal Cavity," *12th International Conference on Transparent Optical Networks (ICTON 2010)*, München, Germany, 2010 (ICTON Tech. Dig.), invited communication.

365. N. Le Thomas, and R. Houdré, "Impacts of losses and disorder on slow light photonic crystal structures," *Workshop on Photonics, Nearfield optics, Imaging. Topical meeting: Towards New Horizons for Photonics in Random Systems.*, Ecully, France, 2010, invited communication.
364. A. Amo, C. Adrados, S. Pigeon, J. Lefrère, C. Ciuti, I. Carusoto, R. Houdré, E. Giacobino, and A. Bramati, "Superfluidity of microcavity polaritons," *30th International Conference on the Physics of Semiconductors (ICPS)*, Seoul, Korea, 2010, invited communication.
363. A. Amo, T. C. H. Liew, C. Adrados, R. Houdré, E. Giacobino, A. V. Kavokin, and A. Bramati, "Exciton-polariton spin switches in semiconductor microcavities," *30th International Conference on the Physics of Semiconductors (ICPS)*, Seoul, Korea, 2010.
362. A. Amo, S. Pigeon, C. Adrados, R. Houdré, E. Giacobino, C. Ciuti, and A. Bramati, "Engineered light-induced potentials in semiconductor microcavities," *30th International Conference on the Physics of Semiconductors (ICPS)*, Seoul, Korea, 2010.
361. H. Zhang, G. Scalari, J. Faist, and R. Houdré, "Third Band Surface Emitting THz Photonic Crystal Quantum Cascade Band-Edge Lasers," *9th Workshop on Photonic and Electromagnetic Crystal Structures (PECS IX)*, Granada, Spain, 2010.
360. N. Le Thomas, H. Zhang, Z. L. Diao, and R. Houdré, "Investigation of residual disorder in silicon planar photonic crystals structures waveguides," *9th Workshop on Photonic and Electromagnetic Crystal Structures (PECS IX)*, Granada, Spain, 2010.
359. N. Le Thomas, H. Zhang, Z. L. Diao, and R. Houdré, "Experimental control of the far field and Q factor of silicon photonic crystals cavities with a top mirror," *9th Workshop on Photonic and Electromagnetic Crystal Structures (PECS IX)*, Granada, Spain, 2010.
358. J. Jágerská, H. Zhang, Z. L. Diao, N. Le Thomas, and R. Houdré, "Air-Slot Photonic Crystal Cavity for High Precision Refractive Index Sensing," *9th Workshop on Photonic and Electromagnetic Crystal Structures (PECS IX)*, Granada, Spain, 2010.
357. D. T. L. Alexander, N. Le Thomas, S. D. Schneider, R. Houdré, M. Cantoni, and C. Hébert, "Cathodoluminescence mapping of Cherenkov-radiation generated Bloch-modes in planar photonic crystals by fast electrons," *Microscopy & Microanalysis 2010 (M&M 2010)*, Portland, USA, 2010.
356. R. Houdré, N. Linder, R. Stanley, C. Wiesmann, and R. Wirth, "Opto-electronic semiconductor chip for emitting electromagnetic radiation, has structure units arranged in statistical distribution with basic condition that distribution of distance of adjacent units has specific standard deviation", Application No Patent No. DE102008045028-A1; WO2010022694-A1.

2009

355. A. Amo, J. Lefrère, S. Pigeon, C. Adrados, C. Ciuti, I. Carusotto, R. Houdré, E. Giacobino, and A. Bramati, "Superfluidity of polaritons in semiconductor microcavities," *Nature Phys.* **5**, 805-810 (2009).
354. N. Le Thomas, H. Zhang, J. Jágerská, V. Zabelin, R. Houdré, I. Sagnes, and A. Talneau, "Light transport regimes in slow light photonic crystal waveguides," *Phys. Rev. B* **80**, 125332 (2009).
353. N. Le Thomas, R. Houdré, D. M. Beggs, and T. F. Krauss, "Fourier space imaging of light localization at a photonic band-edge located below the light cone," *Phys. Rev. B* **79**, 033305 (2009).
352. A. Berrier, M. Swillo, N. Le Thomas, R. Houdré, and S. Anand, "Bloch mode excitation in two-dimensional photonic crystals imaged by Fourier optics," *Phys. Rev. B* **79**, 165116 (2009).

351. K. Van Acoleyen, W. Bogaerts, J. Jágerská, N. Le Thomas, R. Houdré, and R. Baets, "Off-chip beam steering with a one-dimensional optical phased array on silicon-on-insulator," *Opt. Lett.* **34**, 1477-1479 (2009).
350. J. Jágerská, N. Le Thomas, V. Zabelin, R. Houdré, W. Bogaerts, P. Dumon, and R. Baets, "Experimental observation of slow mode dispersion in photonic crystal coupled-cavity waveguides," *Opt. Lett.* **34**, 359-361 (2009).
349. C. Wiesmann, K. Bergenek, R. Houdré, R. P. Stanley, N. Linder, and U. T. Schwarz, "Theoretical Investigation of the Radiation Pattern From LEDs Incorporating Shallow Photonic Crystals," *IEEE J. Quantum Electron.* **45**, 1273-1283 (2009).
348. J. Jágerská, H. Zhang, N. Le Thomas, and R. Houdré, "Radiation loss of photonic crystal coupled-cavity waveguides," *Appl. Phys. Lett.* **95**, 111105 (2009).
347. P. El-Kallassi, R. Ferrini, L. Zuppiroli, S. Balog, L. Balet, L. H. Li, A. Fiore, R. Houdré, M. Francardi, and A. Gerardino, "Local polymer infiltration of planar photonic crystals," *SPIE Photonics West 2009*, San Jose, USA, 2009.
346. N. Le Thomas, J. Jágerská, H. Zhang, V. Zabelin, and R. Houdré, "Dispersion properties of photonic waveguide structures," *Photonics North*, Québec, Canada, 2009, invited communication.
345. N. Le Thomas, R. Houdré, M. Kotlyar, D. M. Beggs, and T. F. Krauss, "Impact of the residual disorder on the slow light regime in 1D and 2D photonic crystals structures," *Lasers and Electro-Optics and Quantum electronics and Laser Science Conference. (CLEO/QELS 2009)*, Baltimore, USA, 2009 (IEEE Conf. Proc.).
344. H. Zhang, G. Scalari, R. Houdré, and J. Faist, "In-plane and surface emitting high performance THz pillar type photonic crystal lasers with complete photonic bandgaps," *Lasers and Electro-Optics 2009 and European Quantum Electronics Conference (CLEO Europe - EQEC 2009)*, München, Germany, 2009 (IEEE Conf. Proc.).
343. J. Jágerská, H. Zhang, N. Le Thomas, V. Zabelin, and R. Houdré, "Dispersion properties of photonic crystal coupled-cavity waveguides," *Lasers and Electro-Optics 2009 and European Quantum Electronics Conference (CLEO Europe - EQEC 2009)*, München, Germany, 2009 (IEEE Conf. Proc.).
342. N. Le Thomas, J. Jágerská, H. Zhang, V. Zabelin, and R. Houdré, "Limits of slow light in actual photonic crystals structures," *International Laser Physics Workshop (LPHYS'09)*, Barcelona, Spain, 2009, invited communication.
341. E. Giacobino, A. Amo, J. Lefrère, S. Pigeon, C. Adrados, C. Ciuti, I. Carusoto, R. Houdré, and A. Bramati, "Polaritons in a semiconductor microcavity: from quantum optics to quantum fluids," *International Laser Physics Workshop (LPHYS'09)*, Barcelona, Spain, 2009, invited communication.
340. N. Le Thomas, J. Jágerská, H. Zhang, and R. Houdré, "Light transport and limits of slow light in real photonic crystal structures in the presence of residual disorder," *11th International Conference on Transparent Optical Networks (ICTON 2009)*, Azores, Portugal, 2009 (ICTON Tech. Dig.), pp. 1271-1273, invited communication.
339. N. Le Thomas, J. Jágerská, H. Zhang, and R. Houdré, "Limits of slow light in real photonic crystals structures," *8th Workshop on Photonic and Electromagnetic Crystal Structures (PECS VIII)*, Sydney, Australia, 2009.

2008

338. N. Le Thomas, V. Zabelin, R. Houdré, M. V. Kotlyar, and T. F. Krauss, "Influence of residual disorder on the anticrossing of Bloch modes probed in k space," *Phys. Rev. B* **78**, 125301 (2008).

337. N. Le Thomas, R. Houdré, M. V. Kotlyar, and T. F. Krauss, "Phase-sensitive Fourier space imaging of optical Bloch modes," *Phys. Rev. B* **77**, 245323 (2008).
336. F. Intonti, S. Vignolini, F. Riboli, A. Vinattieri, D. S. Wiersma, M. Colocci, L. Balet, C. Monat, C. Zinoni, L. H. Li, R. Houdré, M. Francardi, A. Gerardino, A. Fiore, and M. Gurioli, "Spectral tuning and near-field imaging of photonic crystal microcavities," *Phys. Rev. B* **78**, 041401 (R) (2008).
335. F. Intonti, S. Vignolini, F. Riboli, A. Vinattieri, D. S. Wiersma, M. Colocci, M. Gurioli, L. Balet, C. Monat, L. H. Li, N. Le Thomas, R. Houdré, A. Fiore, M. Francardi, A. Gerardino, F. Roemer, and B. Witzigmann, "Near-field mapping of quantum dot emission from single-photon crystal cavity modes," *Physica E* **40**, 1965-1967 (2008), *13th International Conference on Modulated Semiconductor Structures (MSS13) and 17th International Conference on Electronic Properties of 2-Dimensional Systems*, Genova, Italy, 2007.
334. L. Sirigu, R. Terazzi, M. I. Amanti, M. Giovannini, J. Faist, L. A. Dunbar, and R. Houdré, "Terahertz Quantum Cascade Lasers based on two-dimensional photonic crystal resonators," *Opt. Express* **16**, 5206-5217 (2008).
333. M. Francardi, A. Gerardino, L. Balet, N. Chauvin, D. Bitauld, C. Zinoni, L. H. Li, B. Alloing, N. Le Thomas, R. Houdré, and A. Fiore, "Towards a LED based on a photonic crystal nanocavity for single photon sources at telecom wavelength," *Microelectron. Eng.* **85**, 1162-1165 (2008), *33rd International Conference on Micro- and Nano-Engineering (MNE07)*, Copenhagen, Denmark, 2007.
332. P. El-Kallassi, S. Balog, R. Houdré, L. Balet, L. H. Li, M. Francardi, A. Gerardino, A. Fiore, R. Ferrini, and L. Zuppiroli, "Local infiltration of planar photonic crystals with UV-curable polymers," *J. Opt. Soc. Am. B* **25**, 1562-1567 (2008).
331. A. Berrier, R. Ferrini, A. Talneau, R. Houdré, and S. Anand, "Impact of feature-size dependent etching on the optical properties of photonic crystal devices," *J. Appl. Phys.* **103**, 096106 (2008).
330. J. Jágerská, N. Le Thomas, R. Houdré, D. M. Beggs, D. O'Brien, and T. F. Krauss, "Coupling length of silicon-on-insulator directional couplers probed by Fourier-space imaging," *Appl. Phys. Lett.* **92**, 151106 (2008).
329. N. Le Thomas, and R. Houdré, "K-space imaging of planar photonic crystals with Fourier optics," *Photonics Europe 2008*, Strasbourg, France, 2008, invited communication.
328. N. Le Thomas, and R. Houdré, "Below the light line Fourier space imaging of planar photonic crystals," *International Laser Physics Workshop (LPHYS'08)*, Trondheim, Norway, 2008, invited communication.
327. R. Ferrini, P. El-Kallassi, L. Zuppiroli, S. Balog, N. Le Thomas, R. Houdré, L. Balet, L. H. Li, A. Berrier, S. Anand, A. Talneau, M. Francardi, A. Gerardino, and A. Fiore, "Hybrid inorganic-organic photonic devices," *European Optical Society Annual Meeting, Topical meeting on Organic Photonics (EOS)*, Paris, France, 2008.
326. N. Le Thomas, J. Jágerská, R. Houdré, M. Kotlyar, L. O'Faolain, D. M. Beggs, D. O'Brien, T. F. Krauss, J. Bolten, C. Moormann, T. Wahlbrink, J. Čyroký, M. Waldow, M. Först, L. H. Frandsen, J. Fage-Pedersen, A. V. Lavrinenko, and P. I. Borel, "Probing the dispersion properties of 1D nanophotonic waveguides with far-field Fourier optics," *14th European Conference on Integrated Optics (ECIO'08)*, Eindhoven, The Netherlands, 2008.
325. P. El-Kallassi, S. Balog, L. Balet, L. H. Li, R. Ferreira, R. Houdré, A. Fiore, and L. Zuppiroli, "Local tuning of the optical response of two dimensional photonic crystals," *14th European Conference on Integrated Optics (ECIO'08)*, Eindhoven, The Netherlands, 2008.
324. R. Houdré, N. Le Thomas, and J. Jágerská, "Characterisation of photonic crystal and nanophotonics devices with Fourier optics," *10th International Conference on Transparent Optical*

Networks (ICTON 2008), Athens, Greece, 2008 (ICTON Tech. Dig.), **2**, pp. 5-6, invited communication.

323. R. Houdré, "Near Infrared Optical Characterization Techniques for Photonic Crystals," in *Photonic Crystals: Physics and Technology*, C. Sibilia, T. M. Benson, N. Marciniak, and T. Szoplik, eds. (Springer, Milano, 2008), pp. 173-192, notes of the invited lecture at *COST P11 Training School*, Warsaw, Poland, 2007.

2007

322. N. Le Thomas, R. Houdré, L. H. Frandsen, J. Fage-Pedersen, A. V. Lavrinenko, and P. I. Borel, "Grating-assisted superresolution of slow waves in Fourier space," *Phys. Rev. B* **76**, 035103 (2007).

321. V. Zabelin, L. A. Dunbar, N. Le Thomas, R. Houdré, M. V. Kotlyar, L. O'Faolain, and T. F. Krauss, "Self-collimating photonic crystal polarization beam splitter," *Opt. Lett.* **32**, 530-532 (2007).

320. J. Jágerská, N. Le Thomas, R. Houdré, J. Bolten, C. Moormann, T. Wahlbrink, J. Crtyroky, M. Waldow, and M. Forst, "Dispersion properties of silicon nanophotonic waveguides investigated with Fourier optics," *Opt. Lett.* **32**, 2723-2725 (2007).

319. H. Zhang, L. A. Dunbar, G. Scalari, R. Houdré, and J. Faist, "Terahertz photonic crystal quantum cascade lasers," *Opt. Express* **15**, 16818-16827 (2007).

318. A. Gerardino, M. Francardi, L. Balet, C. Monat, C. Zinoni, B. Alloing, L. H. Li, N. Le Thomas, R. Houdré, and A. Fiore, "Fabrication and characterization of point defect photonic crystal nanocavities at telecom wavelength," *Microelectron. Eng.* **84**, 1480-1483 (2007), *32nd International Conference on Micro- and Nano-Engineering (MNE06)*, Barcelona, Spain, 2006.

317. A. Berrier, M. Mulot, S. Anand, A. Talneau, R. Ferrini, and R. Houdré, "Characterization of the feature-size dependence in Ar/Cl₂ chemically assisted ion beam etching of InP-based photonic crystal devices," *J. Vac. Sci. Technol. B* **25**, 1-10 (2007).

316. N. Le Thomas, R. Houdré, M. V. Kotlyar, D. O'Brien, and T. E. Krauss, "Exploring light propagating in photonic crystals with Fourier optics," *J. Opt. Soc. Am. B* **24**, 2964-2971 (2007).

315. P. El-Kallassi, R. Ferrini, L. Zuppiroli, N. Le Thomas, R. Houdré, A. Berrier, S. Anand, and A. Talneau, "Optical tuning of planar photonic crystals infiltrated with organic molecules," *J. Opt. Soc. Am. B* **24**, 2165-2171 (2007).

314. A. Fiore, C. Zinoni, B. Alloing, C. Monat, L. Balet, L. H. Li, N. Le Thomas, R. Houdré, L. Lunghi, M. Francardi, A. Gerardino, and G. Patriarcho, "Telecom-wavelength single-photon sources for quantum communications," *J. Phys. Condens. Matter* **19**, 225005 (2007), *3rd Nanocore Conference*, Frascati, Italy, 2005.

313. G. Scalari, L. Sirigu, R. Terazzi, C. Walther, M. I. Amanti, M. Giovannini, N. Hoyler, J. Faist, M. L. Sadowski, H. Beere, D. Ritchie, L. A. Dunbar, and R. Houdré, "Multi-wavelength operation and vertical emission in THz quantum-cascade lasers," *J. Appl. Phys.* **101**, 081726 (2007), *28th International Conference on the Physics of Semiconductors (ICPS-28)*, Vienna, Austria, 2006.

312. K. E. Moselund, D. Bouvet, L. Tschuor, V. Pott, P. Dainesi, C. Eggimann, N. Le Thomas, R. Houdré, and A. M. Ionescu, "Co-integration of gate-all-around MOSFETs and local silicon-on-insulator optical waveguides on bulk silicon," *IEEE Trans. Nanotechnol.* **6**, 118-125 (2007), *Silicon Nanoelectronics Workshop (SNW06)*, Hawaii, USA, 2006.

311. L. A. Dunbar, R. Houdré, G. Scalari, L. Sirigu, M. Giovannini, and J. Faist, "Small optical volume terahertz emitting microdisk quantum cascade lasers," *Appl. Phys. Lett.* **90**, 141114 (2007).

310. L. Balet, M. Francardi, A. Gerardino, N. Chauvin, B. Alloing, C. Zinoni, C. Monat, L. H. Li, N. Le Thomas, R. Houdré, and A. Fiore, "Enhanced spontaneous emission rate from single InAs quantum dots in a photonic crystal nanocavity at telecom wavelengths," *Appl. Phys. Lett.* **91**, 123115 (2007).
309. V. Zabelin, and R. Houdré, "The perturbation method for photonic crystals using the plane wave expansion," *International Workshop on Optical Waveguide Theory and Numerical Modelling (OWTNM)*, Copenhagen, Denmark, 2007.
308. N. Le Thomas, R. Houdré, M. Kotlyar, and T. F. Krauss, "High NA Fourier space imaging of planar photonic crystals," *European Conference on Lasers and Electro-Optics and International Quantum Electronics Conference. (CLEOE-IQEC 2007)*, München, Germany, 2007 (IEEE Conf. Proc.).
307. N. Le Thomas, R. Houdré, L. H. Frandsen, J. Fage-Pedersen, A. V. Lavrinenko, and P. I. Borel, "Far-field investigation of slow-light propagating below the light cone in planar photonic structures," *European Conference on Lasers and Electro-Optics and International Quantum Electronics Conference. (CLEOE-IQEC 2007)*, München, Germany, 2007 (IEEE Conf. Proc.).
306. P. El-Kallassi, R. Ferrini, L. Zuppiroli, N. Le Thomas, R. Houdré, A. Berrier, S. Anand, and A. Talneau, "Optical and local tuning of planar photonic crystals infiltrated with organic molecules," *European Conference on Lasers and Electro-Optics and International Quantum Electronics Conference. (CLEOE-IQEC 2007)*, München, Germany, 2007 (IEEE Conf. Proc.).
305. N. Le Thomas, R. Houdré, L. H. Frandsen, J. Fage-Pedersen, A. V. Lavrinenko, and P. I. Borel, "Far-field investigation of slow-light propagating below the light cone in planar photonic structures," *Conference on Lasers & Electro-Optics/Quantum Electronics and Laser Science Conference (CLEO/QELS 2007)*, Baltimore, USA, 2007 (IEEE Conf. Proc.).
304. L. Balet, M. Francardi, A. Gerardino, N. Chauvin, B. Alloing, C. Zinoni, C. Monat, L. H. Li, N. Le Thomas, R. Houdré, and A. Fiore, "Coupling of single InAs quantum dots at 1.3 μ m to a photonic crystal cavity mode," *Conference on Lasers & Electro-Optics/Quantum Electronics and Laser Science Conference (CLEO/QELS 2007)*, Baltimore, USA, 2007 (IEEE Conf. Proc.).
303. N. Le Thomas, R. Houdré, M. V. Kotlyar, and T. F. Krauss, "High NA Fourier space imaging of planar photonic crystals," *Conference on Lasers & Electro-Optics/Quantum Electronics and Laser Science Conference (CLEO/QELS 2007)*, Baltimore, USA, 2007 (IEEE Conf. Proc.), pp. 1373-1374.
302. P. El-Kallassi, R. Ferrini, L. Zuppiroli, N. Le Thomas, R. Houdré, A. Berrier, S. Anand, and A. Talneau, "Optical and Local Tuning of Planar Photonic Crystals Infiltrated with Organic Molecules," *Conference on Lasers & Electro-Optics/Quantum Electronics and Laser Science Conference (CLEO/QELS 2007)*, Baltimore, USA, 2007 (IEEE Conf. Proc.), pp. 1375-1376.
301. L. A. Dunbar, G. Scalari, L. Sirigu, M. Giovannini, R. Houdré, and J. Faist, "Electrical and Optical Characterization of Microdisk Quantum Cascade Lasers emitting at Terahertz Frequencies," *Conference on Lasers & Electro-Optics/Quantum Electronics and Laser Science Conference (CLEO/QELS 2007)*, Baltimore, USA, 2007 (IEEE Conf. Proc.), pp. 1049-1050.
300. N. Le Thomas, R. Houdré, M. Kotlyar, and T. F. Krauss, "High numerical aperture Fourier space imaging of planar photonic crystals," *Advances in Physics and Technology in Photonic Crystals, COST P11 Workshop*, Prague, Czech republic, 2007, invited communication.
299. N. Le Thomas, R. Houdré, M. V. Kotlyar, L. O'Faolain, T. F. Krauss, L. H. Frandsen, J. Fage-Pedersen, A. Lavrinenko, and P. I. Borel, "High numerical aperture real and Fourier space investigation of planar photonic devices operating below the light cone," *9th International Conference on Transparent Optical Networks (ICTON 2007)*, Rome, Italy, 2007 (ICTON Tech. Dig.), **2**, p. 12, invited communication.

298. M. Francardi, L. Balet, A. Gerardino, N. Chauvin, B. Alloing, C. Zinoni, C. Monat, L. H. Li, N. Le Thomas, R. Houdré, and A. Fiore, "Control of the spontaneous emission of single InAs quantum dots at 1.3 μm in point-defect photonic crystal nanocavities," *9th International Conference on Transparent Optical Networks (ICTON 2007)*, Rome, Italy, 2007 (ICTON Tech. Dig.), **4**, pp. 294-296, invited communication.
297. N. Le Thomas, R. Houdré, M. Kotlyar, D. O'Brien, and T. F. Krauss, "High NA Fourier space imaging of planar photonic crystals," *7th Workshop on Photonic and Electromagnetic Crystal Structures (PECS VII)*, Monterey, USA, 2007.
296. R. Houdré, V. Zabelin, N. Le Thomas, L. A. Dunbar, M. Kotlyar, L. O'Faolain, and T. F. Krauss, "Photonic crystal polarization beam splitter," *7th Workshop on Photonic and Electromagnetic Crystal Structures (PECS VII)*, Monterey, USA, 2007.

2006

295. M. Francardi, L. Balet, A. Gerardino, C. Monat, C. Zinoni, L. H. Li, B. Alloing, N. Le Thomas, R. Houdré, and A. Fiore, "Quantum dot photonic crystal nanocavities at 1300 nm for telecom-wavelength single-photon sources," *Phys. Status Solidi C* **3**, 3693-3696 (2006), *4th International Conference on Semiconductor Quantum Dots (QD 2006)*, Chamonix Mont Blanc, France.
294. R. Ferrini, J. Martz, L. Zuppiroli, B. Wild, V. Zabelin, L. A. Dunbar, R. Houdré, M. Mulot, and S. Anand, "Planar photonic crystals infiltrated with liquid crystals: optical characterization of molecule orientation," *Opt. Lett.* **31**, 1238-1240 (2006).
293. R. Ferrini, D. Leuenberger, R. Houdré, H. Benisty, M. Kamp, and A. Forchel, "Disorder-induced losses in planar photonic crystals," *Opt. Lett.* **31**, 1426-1428 (2006).
292. J. Martz, R. Ferrini, F. Nuesch, L. Zuppiroli, B. Wild, L. A. Dunbar, R. Houdré, M. Mulot, and S. Anand, "Liquid crystal infiltration of InP-based planar photonic crystals," *J. Appl. Phys.* **99**, 103105 (2006).
291. B. Lombardet, L. A. Dunbar, R. Ferrini, R. Houdré, and F. Robin, "A quantitative analysis of self-collimation effects in planar photonic crystals," *J. Appl. Phys.* **99**, 096108 (2006).
290. R. Houdré, V. Zabelin, N. Le Thomas, L. A. Dunbar, M. V. Kotlyar, T. F. Krauss, and R. Brenot, "Polarization splitter devices based on planar photonic crystals," *Physics of photonic and metamaterials (PPCM)*, Brussels, Belgium, 2006, invited communication.
289. J. R. van Look, V. Zabelin, R. Houdré, M. V. Kotlyar, and T. F. Krauss, "Comparison of polarization splitter devices based on planar photonic crystals," *Photonics Europe 2006*, Strasbourg, France, 2006.
288. R. Ferrini, P. El-Kallassi, J. Martz, L. Zuppiroli, B. Wild, L. A. Dunbar, R. Houdré, F. Robin, A. Berrier, and S. Anand, "Tuneable planar photonic crystals," *Photonics Europe 2006*, Strasbourg, France, 2006.
287. L. Sirigu, R. Terazzi, G. Scalari, M. I. Amanti, M. Giovannini, J. Faist, L. A. Dunbar, and R. Houdré, "Photonic lattice based quantum cascade lasers at terahertz frequencies," *Optical Methods in the Life Sciences*, Boston, USA, 2006, M. Analoui, A. A. Belyanin, R. A. Drezek, C. F. Gmachl, and J. P. Robinson, eds. (SPIE Proc.), **6386**, p. 63860Z.
286. A. Berrier, M. Mulot, A. Talneau, R. Ferrini, R. Houdré, and S. Anand, "Feature size effects in chemically assisted ion beam etching of InP-based photonic crystals," *Nanoengineering: Fabrication, Properties, Optics, and Devices III, Optics and Photonics 2006*, San Diego, USA, 2006, E. A. Dobisz, and L. A. Aldada, eds. (SPIE Proc.), **6327**, p. 632707.

285. V. Zabelin, and R. Houdré, "Numerical modelling of the optical properties of infiltrated photonic crystals," *International Workshop on Optical Waveguide Theory and Numerical Modelling (OWTNM)*, Varese, Italy, 2006.
284. R. Ferrini, P. El-Kallassi, L. Zuppiroli, L. A. Dunbar, N. Le Thomas, R. Houdré, A. Talneau, A. Berrier, and S. Anand, "Planar photonic crystals infiltrated with liquid crystals: tuning of the optical properties," *International Workshop on Liquid Crystals for Photonics*, Ghent, Belgium, 2006.
283. L. Balet, M. Francardi, A. Gerardino, C. Monat, C. Zinoni, L. H. Li, B. Alloing, N. Le Thomas, R. Houdré, and A. Fiore, "Point defect nanocavities in two dimensional photonic crystal membrane for telecom-wavelength single-photon sources," *International Conference on Superlattices, Nano-Structures and Nano-Devices (ICSNN)*, Istanbul, Turkey, 2006.
282. H. Benisty, L. Martinelli, O. Khayam, M. Ayre, M. Kotlyar, T. F. Krauss, M. Midrio, R. Brenot, G. H. Duan, F. van Laere, D. van Thourhout, K. Janiak, H. Heidrich, M. Kamp, H. Scherer, R. Houdré, L. A. Dunbar, and D. Gallagher, "Photonic-Crystal-Based Optical Functions for Metropolitan Area Networks: Polarisation Control, Linear Amplification, Wavelength Selection," *European Conference on Optical Communications, 2006 (ECOC 2006)*, Cannes, France, 2006 (IEEE Conf. Proc.).
281. R. Ferrini, P. El-Kallassi, L. Zuppiroli, B. Wild, L. A. Dunbar, and R. Houdré, "Tuneable planar photonic crystals," *Annual meeting of the Swiss Physical Society*, Lausanne, Switzerland, 2006.
280. L. A. Dunbar, L. Sirigu, V. Moreau, G. Scalari, M. Giovannini, R. Ferrini, N. Hoyler, R. Houdré, and J. Faist, "Photonic crystals for far-infrared wavelength quantum cascade lasers," *Annual meeting of the Swiss Physical Society*, Lausanne, Switzerland, 2006.
279. N. Le Thomas, and R. Houdré, "Fourier optics investigation of planar photonic crystals," *9th International conference on near-field optics, nanophotonics and related techniques (NFO-9)*, Lausanne, Switzerland, 2006.
278. A. Fiore, C. Zinoni, B. Alloing, C. Monat, L. H. Li, N. Le Thomas, R. Houdré, L. Lunghi, M. Francardi, and A. Gerardino, "Telecom-wavelength single-photon sources from quantum dots in microcavities," *8th International Conference on Transparent Optical Networks (ICTON 2006)*, Nottingham, UK, 2006 (ESPC, NAON), 2, pp. 235-236, invited communication.
277. C. Wiesmann, R. Wirth, N. Linder, R. Stanley, and R. Houdré, "Diffraction efficiency of 2D photonic crystal structures on light emitting diodes," *6th International Conference on Numerical Simulation of Optoelectronic Devices (NUSOD '06)*, Singapore, 2006 (IEEE Conf. Proc.), pp. 129-130.
- 2005**
276. B. Lombardet, R. Houdré, and L. A. Dunbar, "Optical condensing device including a photonic crystal", Europe, Application No 05001061.0, Patent No. EP 1 684 102 A1 (2005).
275. E. Viasnoff-Schwoob, C. Weisbuch, H. Benisty, S. Olivier, S. Varoutsis, I. Robert-Philip, R. Houdré, and C. J. M. Smith, "Spontaneous emission enhancement of quantum dots in a photonic crystal wire," *Phys. Rev. Lett.* **95**, 183901 (2005).
274. U. Oesterle, R. P. Stanley, and R. Houdré, "MBE growth of high finesse microcavities," *Phys. Status Solidi B* **242**, 2157-2166 (2005).
273. R. Houdré, "Early stages of continuous wave experiments on cavity-polaritons," *Phys. Status Solidi B* **242**, 2167-2196 (2005).

272. E. Viasnoff-Schwoob, C. Weisbuch, H. Benisty, S. Olivier, R. Houdré, and C. J. M. Smith, "Spontaneous emission enhancement at a photonic wire miniband edge," *Opt. Lett.* **30**, 2113-2115 (2005).
271. L. A. Dunbar, V. Moreau, R. Ferrini, R. Houdré, L. Sirigu, G. Scalari, M. Giovannini, N. Hoyler, and J. Faist, "Design, fabrication and optical characterisation of quantum cascade lasers at terahertz frequencies using photonic crystal reflectors," *Opt. Express* **13**, 8960-8968 (2005).
270. B. Lombardet, L. A. Dunbar, R. Ferrini, and R. Houdré, "Bloch wave propagation in two-dimensional photonic crystals: Influence of the polarization," *Opt. Quantum Electron.* **37**, 293-307 (2005), *12th International Workshop on Optical Waveguide Theory and Numerical Modelling (OWTNM)*, Ghent, Belgium, 2004.
269. B. Lombardet, L. A. Dunbar, R. Ferrini, and R. Houdré, "Fourier analysis of Bloch wave propagation in photonic crystals," *J. Opt. Soc. Am. B* **22**, 1179-1190 (2005).
268. B. Lombardet, R. Ferrini, L. A. Dunbar, R. Houdré, C. Cuisin, O. Drisse, F. Lelarge, F. Pommereau, F. Poingt, and G. H. Duan, "Propagation loss measurements and Fabry-Perot mode analysis using out-of-plane light scattering in photonic crystal waveguides," *Appl. Phys. Lett.* **86**, 111111 (2005).
267. D. Leuenberger, R. Ferrini, L. A. Dunbar, R. Houdré, M. Kamp, and A. Forchel, "Codirectional couplers in GaAs-based planar photonic crystals," *Appl. Phys. Lett.* **86**, 081108 (2005).
266. B. Wild, L. A. Dunbar, R. Houdré, G. H. Duan, C. Cuisin, E. Derouin, O. Drisse, L. Legouézigou, O. Legouézigou, and F. Pommereau, "Low loss two dimensional InP-based photonic crystal waveguides," *Sixth Workshop on Photonic and Electromagnetic Crystal Structures (PECS VI)*, Crete, Greece, 2005.
265. B. Lombardet, L. A. Dunbar, R. Ferrini, and R. Houdré, "Photonic crystal characterization using out of plane scattering," *Sixth Workshop on Photonic and Electromagnetic Crystal Structures (PECS VI)*, Crete, Greece, 2005.
264. B. Lombardet, L. A. Dunbar, R. Ferrini, and R. Houdré, "A Bloch Wave Model that Describes the Dispersive Effects in Photonic Crystals," *Sixth Workshop on Photonic and Electromagnetic Crystal Structures (PECS VI)*, Crete, Greece, 2005.
263. R. Ferrini, J. Martz, B. Wild, L. A. Dunbar, F. Robin, S. Anand, R. Houdré, and L. Zuppiroli, "Tunable planar photonic crystal devices," *Sixth Workshop on Photonic and Electromagnetic Crystal Structures (PECS VI)*, Crete, Greece, 2005.
262. L. A. Dunbar, V. Moreau, B. Lombardet, R. Ferrini, R. Houdré, L. Sirigu, G. Scalari, M. Giovannini, and J. Faist, "Photonic Crystals for Far-Infrared Wavelength Quantum Cascade Lasers," *Sixth Workshop on Photonic and Electromagnetic Crystal Structures (PECS VI)*, Crete, Greece, 2005.
261. J. Martz, R. Ferrini, L. Zuppiroli, B. Wild, L. A. Dunbar, R. Houdré, F. Robin, and S. Anand, "Tuning the optical properties of planar photonic crystals by liquid crystal infiltration," *Optics and Photonics, SPIE annual meeting*, San Diego, USA, 2005 (SPIE proc.), **5926**, pp. 592601-592614, invited communication.
260. R. Ferrini, J. Martz, L. Zuppiroli, B. Wild, L. A. Dunbar, R. Houdré, F. Robin, and S. Anand, "Optical characterization of tunable planar photonic crystals," *Optics and Photonics, SPIE annual meeting*, San Diego, USA, 2005.
259. G. H. Duan, C. Cuisin, E. Derouin, O. Drisse, L. Legouézigou, O. Legouézigou, F. Pommereau, Y. Gottesman, E. V. K. Rao, B. Wild, and R. Houdré, "Fabrication and characterization

of low loss photonic crystal waveguides based on InP substrate," *Optical Fiber Communication (OFC/NFOEC)*, Anaheim, USA, 2005.

258. L. A. Dunbar, V. Moreau, B. Lombardet, R. Ferrini, R. Houdré, L. Sirigu, G. Scalari, M. Giovannini, and J. Faist, "Using photonic crystals to create a quantum cascade lasers at terahertz wavelengths," *Lasers and Electro-Optics Europe (CLEO Europe)*, München, Germany, 2005 (IEEE Conf. Proc.), p. 585.

257. R. Ferrini, P. El-Kallassi, L. Zuppiroli, B. Wild, L. A. Dunbar, and R. Houdré, "Tuneable planar photonic crystals," *Annual meeting of the Swiss Physical Society*, Lausanne, Switzerland, 2005.

256. L. A. Dunbar, L. Sirigu, V. Moreau, G. Scalari, M. Giovannini, R. Ferrini, N. Hoyler, R. Houdré, and J. Faist, "Photonic Crystals for Far-Infrared Wavelength Quantum Cascade Lasers," *Annual meeting of the Swiss Physical Society*, Lausanne, Switzerland, 2005, invited communication.

255. L. A. Dunbar, V. Moreau, B. Lombardet, R. Houdré, L. Sirigu, M. Giovannini, and J. Faist, "Fabrication and optical characterization of photonic crystal quantum cascade lasers at terahertz frequencies," *2005 Pacific Rim Conference on Lasers and Electro-Optics (CLEO Pacific 2005)*, Tokyo, Japan, 2005 (IEEE Conf. Proc.), pp. 1128-1129, invited communication.

254. B. Wild, L. A. Dunbar, R. Houdré, G. H. Duan, C. Cuisin, E. Derouin, O. Drisse, L. Legouézigou, O. Legouézigou, and F. Pommereau, "Characterization and analysis of low loss two dimensional InP-based photonic crystal waveguides," *12th European conference on Integrated Optics (ECIO'05)*, Grenoble, France, 2005.

2004

253. L. A. Dunbar, M. Lynch, A. L. Bradley, J. F. Donegan, R. P. Stanley, U. Oesterle, R. Houdré, M. Illegems, and J. P. Doran, "Polariton scattering processes under resonant excitation in a strongly coupled semiconductor microcavity," *Semicond. Sci. Technol.* **19**, 1104-1112 (2004).

252. J. P. Karr, A. Baas, R. Houdré, and E. Giacobino, "Squeezing in semiconductor microcavities in the strong-coupling regime," *Phys. Rev. A* **69**, 031802 (2004).

251. M. Mulet, S. Anand, R. Ferrini, B. Wild, R. Houdré, J. Moosburger, and A. Forchel, "Fabrication of two-dimensional InP-based photonic crystals by chlorine based chemically assisted ion beam etching," *J. Vac. Sci. Technol. B* **22**, 707-709 (2004).

250. F. Pommereau, L. Legouézigou, S. Hubert, S. Sainson, J. P. Chandouineau, S. Fabre, G. H. Duan, B. Lombardet, R. Ferrini, and R. Houdré, "Fabrication of low loss two-dimensional InP photonic crystals by inductively coupled plasma etching," *J. Appl. Phys.* **95**, 2242-2245 (2004).

249. D. Leuenberger, R. Ferrini, and R. Houdré, "Ab initio tight-binding approach to photonic-crystal based coupled cavity waveguides," *J. Appl. Phys.* **95**, 806-809 (2004).

248. B. Wild, R. Ferrini, R. Houdré, M. Mulet, S. Anand, and C. J. M. Smith, "Temperature tuning of the optical properties of planar photonic crystal microcavities," *Appl. Phys. Lett.* **84**, 846-848 (2004).

247. B. Lombardet, R. Ferrini, L. A. Dunbar, R. Houdré, C. Cuisin, O. Drisse, F. Lelarge, F. Pommereau, F. Poingt, and G. H. Duan, "Internal light source technique free from reabsorption losses for optical characterization of planar photonic crystals," *Appl. Phys. Lett.* **85**, 5131-5133 (2004).

246. R. Ferrini, A. Berrier, L. A. Dunbar, R. Houdré, M. Mulet, S. Anand, S. de Rossi, and A. Talneau, "Minimization of out-of-plane losses in planar photonic crystals by optimizing the vertical waveguide," *Appl. Phys. Lett.* **85**, 3998-4000 (2004).

245. R. Houdré, "Experiment, modelling and optimisation of out of plane losses in planar photonic crystals," *Sixth international Conference on Transparent Optical Networks (ICTON 2004)*, Wroclaw, Poland, 2004, invited communication.
244. B. Wild, R. Ferrini, R. Houdré, M. Mulot, S. Anand, and C. J. M. Smith, "Temperature tuning of the optical properties of planar photonic crystal microcavities," *Photonic Crystal Materials and Nanostructures (Photonics Europe 2004)*, Strasbourg, France, 2004, R. M. De la Rue, V. Viktorovitch, C. M. Sotomayor Torres, and M. Midrio, eds. (SPIE Proc.), **5450**, pp. 311-317.
243. B. Lombardet, L. A. Dunbar, R. Ferrini, and R. Houdré, "Fourier analysis of Bloch wave propagation in two-dimensional photonic crystals," *Photonic Crystal Materials and Nanostructures (Photonics Europe 2004)*, Strasbourg, France, 2004, R. M. De la Rue, V. Viktorovitch, C. M. Sotomayor Torres, and M. Midrio, eds. (SPIE Proc.), **5450**, pp. 150-160.
242. C. Weisbuch, E. Schwoob, S. Olivier, H. Benisty, A. Talneau, G. H. Duan, T. F. Krauss, C. J. M. Smith, R. Houdré, R. Ferrini, and M. Agio, "Towards real-world devices in InP-based PCs," *Photonic Crystal Materials and Devices II, Photonic West 2004*, San Jose, USA, 2004, A. Adibi, A. Scherer, and S. Y. Lin, eds. (SPIE Proc.), **5360**, pp. 77-90, invited communication.
241. H. Benisty, C. Weisbuch, S. Olivier, R. Houdré, R. Ferrini, D. Leuenberger, B. Wild, B. Lombardet, M. Qiu, S. Anand, M. Mulot, A. Karlsson, M. Swillo, B. Jazkorzyska, M. Agio, M. Kafesaki, C. M. Soukoulis, A. Talneau, M. Kamp, A. Forchel, J. Moosburger, T. Happ, G. H. Duan, C. Cuisin, J. P. Chandouineau, O. Drisse, F. Gaborit, L. Legouezigou, O. Legouezigou, F. Lelarge, F. Poingt, F. Pommereau, and B. Thedrez, "Low-loss photonic-crystal and monolithic InP integration : bands, bends, lasers, filters," *Photonic Crystal Materials and Devices II, Photonic West 2004*, San Jose, USA, 2004, A. Adibi, A. Scherer, and S. Y. Lin, eds. (SPIE Proc.), **5360**, pp. 119-128, invited communication.
240. B. Wild, R. Ferrini, and R. Houdré, "Temperature tuning of optical properties of planar photonic crystal microcavities," *Annual meeting of the Swiss Physical Society*, Neuchâtel, Switzerland, 2004.
239. J. Martz, L. Zuppiroli, F. Nüesch, B. Wild, B. Lombardet, L. A. Dunbar, R. Ferrini, R. Houdré, and M. Ilegems, "Infiltration of planar photonic crystals with liquid crystals," *Annual meeting of the Swiss Physical Society*, Neuchâtel, Switzerland, 2004, invited communication.
238. L. A. Dunbar, D. Leuenberger, B. Lombardet, B. Wild, R. Ferrini, R. Houdré, and M. Ilegems, "Planar photonic crystals: a new material for integrated photonic devices," *Annual meeting of the Swiss Physical Society*, Neuchâtel, Switzerland, 2004, invited communication.
237. S. Anand, M. Mulot, A. Berrier, R. Ferrini, R. Houdré, M. Kamp, and A. Forchel, "Towards realization of high quality 2D-photonic crystals in InP/GaInAsP/InP," *2004 International Conference on Indium Phosphide and Related Materials, Conference Proceedings (IPRM)*, Kagoshima, Japan, 2004.
236. C. Weisbuch, A. David, T. Fujii, C. Schwach, S. Denbaars, S. Nakamura, M. Rattier, H. Benisty, R. Houdré, R. Stanley, J. F. Carlin, T. F. Krauss, and C. J. M. Smith, "Recent results and latest views on microcavity LEDs," *8th Conference on Light-Emitting Diodes, Photonic West 2004*, San Jose, USA, 2004, S. A. Stockman, H. W. Yao, and E. F. Schubert, eds. (SPIE proc.), **5366**, pp. 1-19, invited communication.
235. B. Lombardet, R. Ferrini, L. A. Dunbar, R. Houdré, C. Cuisin, O. Drisse, F. Gaborit, F. Lelarge, F. Pommereau, F. Poingt, and G. H. Duan, "Optical properties of planar photonic crystals measured by an internal light source technique exempt from reabsorption losses," *5th Workshop on Photonic and Electromagnetic Crystal Structures (PECS V)*, Kyoto, Japan, 2004.
234. R. Houdré, R. Ferrini, L. A. Dunbar, D. Leuenberger, A. Forchel, M. Kamp, S. Anand, M. Mulot, A. Berrier, A. Talneau, S. de Rossi, and H. Benisty, "Out of plane losses in planar photonic

crystals: experiment, modelling and optimization," *5th Workshop on Photonic and Electromagnetic Crystal Structures (PECS V)*, Kyoto, Japan, 2004.

2003

233. S. Olivier, H. Benisty, C. Weisbuch, C. J. M. Smith, T. F. Krauss, and R. Houdré, "Coupled-mode theory and propagation losses in photonic crystal waveguides," *Opt. Express* **11**, 1490-1496 (2003).
232. R. Ferrini, R. Houdré, H. Benisty, M. Qiu, and J. Moosburger, "Radiation losses in planar photonic crystals: two-dimensional representation of hole depth and shape by an imaginary dielectric constant," *J. Opt. Soc. Am. B* **20**, 469-478 (2003).
231. M. Rattier, H. Benisty, E. Schwoob, C. Weisbuch, T. F. Krauss, C. J. M. Smith, R. Houdré, and U. Oesterle, "Omnidirectional and compact guided light extraction from Archimedean photonic lattices," *Appl. Phys. Lett.* **83**, 1283-1285 (2003).
230. R. Ferrini, B. Lombardet, B. Wild, R. Houdré, and G. H. Duan, "Hole depth- and shape-induced radiation losses in two-dimensional photonic crystals," *Appl. Phys. Lett.* **82**, 1009-1011 (2003).
229. R. Houdré, R. Ferrini, L. A. Dunbar, D. Leuenberger, B. Lombardet, B. Wild, and M. Ilegems, "Planar photonic crystals: a new material for integrated photonic devices," *Third International Conference on advanced materials and Devices (ICAMD03)*, Jeju, Korea, 2003, invited communication.
228. R. Houdré, "State of the art low index contrast planar photonic crystals," *Fifth international Conference on Transparent Optical Networks (ICTON 2003)*, Warsaw, Poland, 2003, invited communication.
227. S. Anand, M. Mulo, R. Ferrini, R. Houdré, M. Kamp, and A. Forchel, "Towards realization of high quality 2D-photonic crystals in InP/(Ga,In)(As,P)/InP," *Fifth International Conference on Transparent Optical Networks (ICTON 2003)*, Warsaw, Poland, 2003, invited communication.
226. S. Olivier, H. Benisty, C. Weisbuch, C. J. M. Smith, T. F. Krauss, R. Houdré, and U. Oesterle, "All-photonic-crystal add-drop filter exploiting low group velocity modes," *11th European Conference on Integrated Optics (ECIO2003)*, Prague, Czech Republic, 2003.

2002

225. L. A. Dunbar, R. P. Stanley, M. Lynch, J. Hegarty, U. Oesterle, R. Houdré, and M. Ilegems, "Excitation-induced coherence in a semiconductor microcavity," *Phys. Rev. B* **66**, 195307 (2002).
224. L. A. Dunbar, M. Lynch, A. L. Bradley, J. F. Donegan, J. Hegarty, R. P. Stanley, U. Oesterle, R. Houdré, and M. Ilegems, "Collisional broadening of semiconductor microcavity polaritons," *Phys. Status Solidi A* **190**, 435-440 (2002), 7th International Conference on Optics and Excitons in Confined Systems (OECS7), Montpellier, France, 2001.
223. M. Rattier, T. F. Krauss, J. F. Carlin, R. Stanley, U. Oesterle, R. Houdré, C. J. M. Smith, R. M. De La Rue, H. Benisty, and C. Weisbuch, "High extraction efficiency, laterally injected, light emitting diodes combining microcavities and photonic crystals," *Opt. Quantum Electron.* **34**, 79-89 (2002).
222. J. Moosburger, M. Kamp, A. Forchel, R. Ferrini, D. Leuenberger, R. Houdré, S. Anand, and J. Berggren, "Nanofabrication of high quality photonic crystals for integrated optics circuits," *Nanotechnology* **13**, 341-345 (2002), *2nd International Conference on Trends in Nanotechnology (TNT2001)*, Segovia, Spain, 2001.

221. E. Schwoob, H. Benisty, S. Olivier, C. Weisbuch, C. J. M. Smith, T. F. Krauss, R. Houdré, and U. Oesterle, "Two-mode fringes in planar photonic crystal waveguides with constrictions: a probe that is sensitive to propagation losses," *J. Opt. Soc. Am. B* **19**, 2403-2412 (2002).
220. S. Olivier, H. Benisty, C. Weisbuch, C. J. M. Smith, T. F. Krauss, R. Houdré, and U. Oesterle, "Improved 60 degrees bend transmission of submicron-width waveguides defined in two-dimensional photonic crystals," *IEEE J. Lightwave Technol.* **20**, 1198-1203 (2002).
219. J. Moosburger, M. Kamp, A. Forchel, U. Oesterle, and R. Houdré, "Transmission spectroscopy of photonic crystal based waveguides with resonant cavities," *J. Appl. Phys.* **91**, 4791-4794 (2002).
218. J. X. Chen, A. Markus, A. Fiore, U. Oesterle, R. P. Stanley, J. F. Carlin, R. Houdré, M. Ilegems, L. Lazzarini, L. Nasi, M. T. Todaro, E. Piscopiello, R. Cingolani, M. Catalano, J. Katcki, and J. Ratajczak, "Tuning InAs/GaAs quantum dot properties under Stranski-Krastanov growth mode for 1.3 μm applications," *J. Appl. Phys.* **91**, 6710-6716 (2002).
217. M. Rattier, H. Benisty, R. P. Stanley, J. F. Carlin, R. Houdré, U. Oesterle, C. J. M. Smith, C. Weisbuch, and T. F. Krauss, "Toward Ultrahigh-Efficiency aluminum oxide microcavity light-emitting diodes: Guided mode extraction by photonic crystals," *IEEE J. Sel. Top. Quantum Electron.* **8**, 238-247 (2002).
216. S. Olivier, C. J. M. Smith, H. Benisty, C. Weisbuch, T. F. Krauss, R. Houdré, and U. Oesterle, "Cascaded photonic crystal guides and cavities: Spectral studies and their impact on integrated optics design," *IEEE J. Quantum Electron.* **38**, 816-824 (2002), *Third workshop on photonic and electromagnetic crystal structures (PECS III)*, St Andrews, Scotland, UK, 2001.
215. R. Ferrini, D. Leuenberger, M. Mulet, M. Qiu, J. Moosburger, M. Kamp, A. Forchel, S. Anand, and R. Houdré, "Optical study of two-dimensional InP-based photonic crystals by internal light source technique," *IEEE J. Quantum Electron.* **38**, 786-799 (2002), *Third workshop on photonic and electromagnetic crystal structures (PECS III)*, St Andrews, Scotland, UK, 2001.
214. H. Benisty, S. Olivier, C. Weisbuch, M. Agio, M. Kafesaki, C. M. Soukoulis, M. Qiu, M. Swillo, A. Karlsson, B. Jaskorzynska, A. Talneau, J. Moosburger, M. Kamp, A. Forchel, R. Ferrini, R. Houdré, and U. Oesterle, "Models and measurements for the transmission of submicron-width waveguide bends defined in two-dimensional photonic crystals," *IEEE J. Quantum Electron.* **38**, 770-785 (2002), *Third workshop on photonic and electromagnetic crystal structures (PECS III)*, St Andrews, Scotland, UK, 2001.
213. R. Ferrini, B. Lombardet, B. Wild, R. Houdré, S. Olivier, H. Benisty, A. Djoudi, L. Legouezigou, S. Hubert, S. Sainson, J. P. Chandouineau, S. Fabre, F. Pommereau, and G. H. Duan, "Optical characterisation of 2D InP-based photonic crystals fabricated by inductively coupled plasma etching," *Electron. Lett.* **38**, 962-964 (2002).
212. D. Ochoa, R. Houdré, M. Ilegems, C. Hanke, and B. Borchert, "Microcavity light emitting diodes as efficient planar light emitters for telecommunication applications," *C. R. Phys.* **3**, 3-14 (2002).
211. R. Houdré, R. P. Stanley, U. Oesterle, and C. Weisbuch, "Strong coupling regime in semiconductor microcavities," *C. R. Phys.* **3**, 15-27 (2002).
210. R. Houdré, "Two dimensional photonic crystals for physics and integrated optics," *Journées de la société Suisse de Physique*, Lausanne, Switzerland, 2002, invited communication.
209. R. Houdré, B. Lombardet, R. Ferrini, and G. H. Duan, "Optical study of bi-dimensional photonic crystal structures fabricated by inductively coupled plasma etching in InP-based waveguides," *Fourth Workshop on Photonic and Electromagnetic Crystal Structures (PECS IV)*, Los Angeles, USA, 2002.

208. R. Ferrini, B. Wild, B. Lombardet, D. Leuenberger, R. Houdré, and H. Benisty, "Out-of-plane losses in bi-dimensional photonic crystals: analytical model and optical measurements," *Fourth Workshop on Photonic and Electromagnetic Crystal Structures (PECS IV)*, Los Angeles, USA, 2002.

207. C. Weisbuch, H. Benisty, S. Olivier, R. Ferrini, and R. Houdré, "Harnessing losses of real-world 2D photonic crystals," *Fourth International Conference on Transparent Optical Networks (ICTON 2002)*, Warsaw, Poland, 2002, invited communication.

2001

206. G. Messin, J. P. Karr, A. Baas, G. Khitrova, R. Houdré, R. P. Stanley, U. Oesterle, and E. Giacobino, "Parametric polariton amplification in semiconductor microcavities," *Phys. Rev. Lett.* **87**, 127403 (2001).

205. S. Olivier, M. Rattier, H. Benisty, C. Weisbuch, C. J. M. Smith, R. M. De la Rue, T. F. Krauss, U. Oesterle, and R. Houdré, "Mini-stopbands of a one-dimensional system: The channel waveguide in a two-dimensional photonic crystal," *Phys. Rev. B* **63**, 113311 (2001).

204. R. Houdré, R. P. Stanley, U. Oesterle, and C. Weisbuch, "Linear response and Rayleigh scattering of cavity-polaritons," *Physica E* **11**, 198-204 (2001), *Rutherford Memorial Workshop on Semiconductor Nanostructures*, Queenstown, New Zealand, 2001, invited communication.

203. S. Olivier, C. Smith, M. Rattier, H. Benisty, C. Weisbuch, T. Krauss, R. Houdré, and U. Oesterle, "Miniband transmission in a photonic crystal coupled-resonator optical waveguide," *Opt. Lett.* **26**, 1019-1021 (2001).

202. A. Fiore, U. Oesterle, R. P. Stanley, R. Houdré, F. Lelarge, M. Ilegems, P. Borri, W. Langbein, D. Birkedal, J. M. Hvam, M. Cantoni, and F. Bobard, "Structural and electrooptical characteristics of quantum dots emitting at 1.3 μm on gallium arsenide," *IEEE J. Quantum Electron.* **37**, 1050-1058 (2001).

201. C. J. M. Smith, R. M. De la Rue, M. Rattier, S. Olivier, H. Benisty, C. Weisbuch, T. F. Krauss, R. Houdré, and U. Oesterle, "Coupled guide and cavity in a two-dimensional photonic crystal," *Appl. Phys. Lett.* **78**, 1487-1489 (2001).

200. S. Olivier, H. Benisty, M. Rattier, C. Weisbuch, M. Qiu, A. Karlsson, C. J. M. Smith, R. Houdré, and U. Oesterle, "Resonant and nonresonant transmission through waveguide bends in a planar photonic crystal," *Appl. Phys. Lett.* **79**, 2514-2516 (2001).

199. M. Rattier, H. Benisty, C. Weisbuch, C. J. M. Smith, T. F. Krauss, J. F. Carlin, R. P. Stanley, R. Houdré, and U. Oesterle, "Photonic crystal extractors," *Third Workshop on Photonic and Electromagnetic Crystal Structures (PECS III)*, St Andrews, Scotland, UK, 2001, invited communication.

198. D. Leuenberger, R. Ferrini, and R. Houdré, "Modelling of coupled optical waveguides (CROW) using a plane wave expansion method and a tight-binding approach," *Third Workshop on Photonic and Electromagnetic Crystal Structures (PECS III)*, St Andrews, Scotland, UK, 2001.

197. R. Ferrini, D. Leuenberger, M. L. Mulot, M. Qiu, J. Moosburger, M. Kamp, A. Forchel, S. Anand, and R. Houdré, "Optical study of 2D photonic crystals in an InP/GaInAsP slab waveguide structure," *Progress in Semiconductor Materials for Optoelectron Applications at 2001 MRS Fall Meeting*, Boston, USA, 2001, E. D. Jones, O. Manasreh, K. D. Choquette, D. J. Friedman, and D. K. Johnstone, eds. (MRS Proceedings), **692**, pp. 685-690 (2002).

196. R. Ferrini, D. Leuenberger, R. Houdré, M. Mulot, M. Qiu, S. Anand, J. Moosburger, T. Happ, M. Kamp, and A. Forchel, "Optical study of two-dimensional photonic crystals in a InP/InGaAsP slab waveguide structure," *MRS Fall meeting*, Boston, USA, 2001.

195. D. Ochoa, R. P. Stanley, R. Houdré, M. Ilegems, C. Hanke, and B. Borchert, "880nm surface emitting microcavity light emitting diode," *Light-Emitting Diodes: Research Manufacturing, and Applications V*, San Jose, USA, 2001, H. W. Yao, and E. F. Schubert, eds. (SPIE Proc.), **4278**, pp. 70-80.
194. J. Moosburger, M. Kamp, A. Forchel, H. Benisty, C. Weisbuch, and R. Houdré, "Transmission spectra measurements on photonic crystal based bent waveguides," *Lasers and electro-optics and Quantum electronics and laser science conference(CLEO/QELS'01)*, 2001.
193. R. Houdré, R. P. Stanley, U. Oesterle, C. Weisbuch, and E. Giacobino, "Angular resolved emission of cavity-polariton under resonant excitation," *Alaskan meeting on fundamental optical processes in semiconductors*, Girdwood, Alaska, USA, 2001, invited communication.
192. R. Houdré, R. P. Stanley, U. Oesterle, and C. Weisbuch, "Strong coupling regime and cavity-polariton in semiconductor microcavities," *10th International laser physics workshop*, Moscow, Russia, 2001, invited communication.
191. R. Houdré, R. P. Stanley, U. Oesterle, C. Weisbuch, and E. Giacobino, "CW linear and non linear properties of microcavities in the strong coupling regime," *7th Conference on optics and exciton in confined systems (OECS)*, Montpellier, France, 2001, invited communication.

2000

190. J. F. Carlin, P. Royo, R. P. Stanley, R. Houdré, J. Spicher, U. Oesterle, and M. Ilegems, "Design and characterization of top-emitting microcavity light-emitting diodes," *Semicond. Sci. Technol.* **15**, 145-154 (2000).
189. R. Houdré, C. Weisbuch, R. P. Stanley, U. Oesterle, and M. Ilegems, "Nonlinear emission of semiconductor microcavities in the strong coupling regime," *Phys. Rev. Lett.* **85**, 2793-2796 (2000).
188. F. Quochi, M. Saba, C. Ciuti, R. P. Stanley, R. Houdré, U. Oesterle, J. L. Staehli, B. Deveaud, G. Bongiovanni, and A. Mura, "Direct observation of an ac Stark splitting in semiconductor microcavities excited above the continuum onset," *Phys. Rev. B* **61**, R5113-R5116 (2000).
187. D. Ochoa, R. Houdré, M. Ilegems, H. Benisty, T. F. Krauss, and C. J. M. Smith, "Diffraction of cylindrical Bragg reflectors surrounding an in-plane semiconductor microcavity," *Phys. Rev. B* **61**, 4806-4812 (2000).
186. R. Houdré, C. Weisbuch, R. P. Stanley, U. Oesterle, and M. Ilegems, "Coherence effects in light scattering of two-dimensional photonic disordered systems: Elastic scattering of cavity polaritons," *Phys. Rev. B* **61**, R13333-R13336 (2000).
185. R. Houdré, C. Weisbuch, R. P. Stanley, U. Oesterle, and M. Ilegems, "Linear and non-linear behavior of cavity polaritons," *Physica E* **7**, 625-630 (2000), 9th International Conference on Modulated Semiconductor Structures (MSS9), Fukuoka, Japan, 1999, invited communication.
184. C. J. M. Smith, T. F. Krauss, H. Benisty, M. Rattier, C. Weisbuch, U. Oesterle, and R. Houdré, "Directionally dependent confinement in photonic-crystal microcavities," *J. Opt. Soc. Am. B* **17**, 2043-2051 (2000).
183. A. Garnache, A. A. Kachanov, F. Stoeckel, and R. Houdré, "Diode-pumped broadband vertical-external-cavity surface-emitting semiconductor laser applied to high-sensitivity intracavity absorption spectroscopy," *J. Opt. Soc. Am. B* **17**, 1589-1598 (2000).
182. C. Weisbuch, H. Benisty, and R. Houdré, "Overview of fundamentals and applications of electrons, excitons and photons in confined structures," *J. Luminesc.* **85**, 271-293 (2000), *3rd international conference on excitonic process in condensed matter*, Boston, USA, 1998, invited communication.

181. A. L. Bradley, J. P. Doran, J. Hegarty, R. P. Stanley, U. Oesterle, R. Houdré, and M. Ilegems, "Nonlinear reflectivity of strongly coupled exciton-photon systems under resonant and non-resonant pumping," *J. Luminesc.* **85**, 261-270 (2000), *3rd international conference on excitonic process in condensed matter*, Boston, USA, 1999, invited communication.
180. A. Garnache, A. A. Kachanov, F. Soeckel, R. Planel, V. Thierry-Mieg, and R. Houdré, "Diode-pumped broadband vertical external cavity surface emitting semiconductor lasers. Application to high sensitivity intracavity absorption spectroscopy," *J. Phys. IV* **10**, 203-205 (2000), *6th Colloquium on Lasers and Quantum Optics*, Talence, France, 2000.
179. C. Weisbuch, H. Benisty, and R. Houdré, "Microcavities, photonic crystals and semiconductors: From basic physics to applications in light emitters," *International Journal of high speed electronics and systems* **10**, 339-354 (2000), *Workshop on future electronics*, Villard de Lans, France, 1999, invited communication.
178. C. J. M. Smith, H. Benisty, S. Olivier, M. Rattier, C. Weisbuch, T. F. Krauss, R. M. De La Rue, R. Houdré, and U. Oesterle, "Low-loss channel waveguides with two-dimensional photonic crystal boundaries," *Appl. Phys. Lett.* **77**, 2813-2815 (2000).
177. D. Ochoa, R. Houdré, R. P. Stanley, M. Ilegems, H. Benisty, C. Hanke, and B. Borchert, "Spontaneous emission model of lateral light extraction from heterostructure light-emitting diodes," *Appl. Phys. Lett.* **76**, 3179-3181 (2000).
176. A. Fiore, P. Borri, W. Langbein, J. M. Hvam, U. Oesterle, R. Houdré, R. P. Stanley, and M. Ilegems, "Time-resolved optical characterization of InAs/InGaAs quantum dots emitting at 1.3 μm ," *Appl. Phys. Lett.* **76**, 3430-3432 (2000).
175. P. Dumas, V. Derycke, I. V. Makarenko, R. Houdré, P. Guaino, A. Downes, and F. Salvan, "Scanning-tunneling-microscopy-induced optical spectroscopy of a single GaAs quantum well," *Appl. Phys. Lett.* **77**, 3992-3994 (2000).
174. C. J. M. Smith, H. Benisty, M. Rattier, S. Olivier, T. F. Krauss, R. M. De La Rue, R. Houdré, U. Oesterle, and C. Weisbuch, "Quantitative and qualitative analysis of 2D photonic crystal waveguides," *Workshop on Photonic and Electromagnetic Crystal Structures (PECS II)*, Japan, 2000.
173. D. Ochoa, J. F. Carlin, R. Houdré, R. P. Stanley, M. Ilegems, C. Hanke, and B. Borchert, "880nm top emitting Microcavity Light Emitting Diode and Waveguide Anti-Resonant Tapered Light Emitting Diode," *Summer school and European Optical Society Topical Meeting on Semiconductor Microcavity Photonics*, Monte Verità, Ascona, Switzerland, 2000.
172. M. Rattier, T. F. Krauss, H. Benisty, C. J. M. Smith, C. Weisbuch, R. Houdré, and U. Oesterle, "Ultra-thin, laterally injected light-emitting diodes, the role of photonic crystals for light extraction," *Lasers and electro-optics (CLEO/QELS 2000)*, San Francisco, USA, 2000.
171. R. Houdré, R. P. Stanley, U. Oesterle, and C. Weisbuch, "Physics and devices with semiconductor microcavities," *International school on quantum electronics, Nanoscale linear and non-linear optics*, Erice, Italy, 2000, M. Bertolotti, C. M. Bowden, and C. Sibilìa, eds. (American Institute of Physics, New York), **560**, pp. 198-219 (2001), invited lecture.
170. M. Saba, F. Quocchi, C. Ciuti, R. P. Stanley, R. Houdré, U. Oesterle, J. L. Staehli, B. Deveaud, G. Bongiovanni, and A. Mura, "Crossover from exciton to biexciton cavity polaritons," *Conference on quantum electronics and laser science (CLEO/QELS 2000)*, San Francisco, USA, 2000.
169. F. Quocchi, M. Saba, C. Ciuti, R. P. Stanley, R. Houdré, U. Oesterle, J. L. Staehli, B. Deveaud, and G. Bongiovanni, "The excitonic AC Stark effect in high energy excited semiconductor microcavities," *Conference on quantum electronics and laser science (CLEO/QELS 2000)*, San Francisco, USA, 2000.

168. A. Garnache, A. A. Kachanov, F. Stoeckel, and R. Houdré, "Diode-pumped broadband vertical external cavity surface emitting semiconductor laser. Application to high sensitivity intra-cavity laser absorption spectroscopy," *Conference on quantum electronics and laser science (CLEO/QELS 2000)*, San Francisco, USA, 2000.
167. H. Benisty, S. Olivier, M. Rattier, C. Weisbuch, C. J. M. Smith, T. F. Krauss, R. M. De La Rue, R. Houdré, and U. Oesterle, "All-photonic-crystal coupled cavity and guide," *Conference on quantum electronics and laser science (CLEO/QELS 2000)*, San Francisco, USA, 2000, invited communication.
166. A. Fiore, P. Borri, W. Langbein, J. M. Hvam, U. Oesterle, R. Houdré, and M. Ilegems, "Time resolved characterization of InAs/InGaAs quantum dot gain material for 1.3 μm lasers on gallium arsenide," *Conference on Lasers and Electro-Optics (CLEO/QELS 2000)*, San Francisco, USA, 2000.
165. A. Garnache, A. C. Tropper, A. Kachanov, D. Romanini, F. Stoeckel, R. Planel, V. Thierry Miege, and R. Houdré, "Diode-pumped broadband vertical-external-cavity surface-emitting semiconductor lasers. Design and applications," *2000 Conference on Lasers and Electro-Optics Europe (CLEO Europe)*, Nice, France, 2000.
164. R. Houdré, R. P. Stanley, C. Weisbuch, and U. Oesterle, "Non linear spatial patterning and coherent scattering effects in cavity-polaritons," *25th International Conference on the Physics of Semiconductors*, Osaka, Japan, 2000.

1999

163. D. Labilloy, H. Benisty, C. Weisbuch, C. J. M. Smith, T. F. Krauss, R. Houdré, and U. Oesterle, "Finely resolved transmission spectra and band structure of two-dimensional photonic crystals using emission from InAs quantum dots," *Phys. Rev. B* **59**, 1649-1652 (1999).
162. C. J. M. Smith, T. F. Krauss, R. M. De la Rue, D. Labilloy, M. Rattier, H. Benisty, C. Weisbuch, D. Ochoa, R. Houdré, and U. Oesterle, "Waveguide microcavities with photonic crystal mirrors," *Optics and photonics news* **10**, 22-23 (1999).
161. H. Benisty, C. Weisbuch, D. Labilloy, M. Rattier, C. J. M. Smith, T. F. Krauss, R. M. De la Rue, R. Houdré, U. Oesterle, C. Jouanin, and D. Cassagne, "Optical and confinement properties of two-dimensional photonic crystals," *IEEE J. Lightwave Technol.* **17**, 2063-2077 (1999), *Workshop on Electromagnetic Crystal Structures*, Laguna Beach CA, USA, 1999.
160. D. Ochoa, R. Houdré, R. P. Stanley, C. Dill, U. Oesterle, and M. Ilegems, "Device simultaneous determination of the source and cavity parameters of a microcavity light-emitting diode," *J. Appl. Phys.* **85**, 2994-2996 (1999).
159. D. Labilloy, H. Benisty, C. Weisbuch, T. F. Krauss, D. Cassagne, C. Jouanin, R. Houdré, U. Oesterle, and V. Bardinal, "Diffraction efficiency and guided light control by two-dimensional photonic-bandgap lattices," *IEEE J. Quantum Electron.* **35**, 1045-1052 (1999).
158. C. J. M. Smith, H. Benisty, D. Labilloy, U. Oesterle, R. Houdré, T. F. Krauss, R. M. De la Rue, and C. Weisbuch, "Near-infrared microcavities confined by two-dimensional photonic bandgap crystals," *Electron. Lett.* **35**, 228-230 (1999).
157. A. Shaw, B. Roycroft, J. Hegarty, D. Labilloy, H. Benisty, C. Weisbuch, T. F. Krauss, C. J. M. Smith, R. Stanley, R. Houdré, and U. Oesterle, "Lasing properties of disk microcavity based on a circular Bragg reflector," *Appl. Phys. Lett.* **75**, 3051-3053 (1999).
156. P. Royo, R. P. Stanley, R. Houdré, M. Ilegems, M. Moser, R. Hovel, H. P. Schweizer, and K. H. Gulden, "AlGaInP-based microcavity light-emitting diodes: Controlled on-wafer detuning and measurement of the internal quantum efficiency," *Appl. Phys. Lett.* **75**, 4052-4054 (1999).

155. H. Benisty, J. M. Gérard, R. Houdré, J. Rarity, and C. Weisbuch, eds. *Confined Photon systems. Fundamentals and applications, lecture notes of QED phenomena and applications of microcavities and photonic crystals*, Cargèse, Corsica, France, 1998, Lectures notes in Physics **531** (Springer, Berlin, 1999).
154. C. J. M. Smith, S. Olivier, H. Benisty, M. Rattier, C. Weisbuch, U. Oesterle, R. Houdré, and T. F. Krauss, "Photonic crystal integrated circuits: technology and devices towards integration," *MRS, 2000 Fall meeting*, Boston, USA, 1999, K. Wada, P. Wiltzius, T. F. Kraus, K. Asakawa, and E. L. Thomas, eds. (MRS Proceedings), **637**, p. E3.1 (2000).
153. P. Royo, J. F. Carlin, J. Spicher, R. Stanley, R. Houdré, V. Bardinal, U. Oesterle, and M. Ilegems, "High efficiency top-emitting microcavity light-emitting diodes," *Light-Emitting Diodes: Research, Manufacturing, and Applications III*, San Jose, USA, 1999, E. F. Schubert, I. T. Ferguson, and H. W. Yao, eds. (SPIE Proc.), **3621**, pp. 151-159.
152. A. Garnache, A. A. Kachanov, F. Stoeckel, R. Planel, and R. Houdré, "High sensitivity intra-cavity laser absorption spectroscopy with a diode-pumped broadband vertical external cavity surface emitting semiconductor laser," *COLOQ 6 Lasers et optique quantique*, Bordeaux, France, 1999.
151. A. Garnache, A. A. Kachanov, F. Stoeckel, R. Planel, and R. Houdré, "High sensitivity intra-cavity laser absorption spectroscopy with vertical external cavity surface emitting semiconductor lasers," *54th International symposium on molecular spectroscopy*, Columbus, USA, 1999.
150. A. Fiore, U. Oesterle, R. Houdré, D. Vez, R. P. Stanley, and M. Ilegems, "Long-wavelength edge-emitting lasers on gallium arsenide using InAs quantum dots embedded in InGaAs," *26th International Symposium on Compound Semiconductors*, Berlin, Germany, 1999, K. H. Ploog, G. Tränkle, and W. G., eds. (Institute of Physics conference series, Bristol, UK), **166**, pp. 273-276 (2000).
149. R. M. De La Rue, C. J. M. Smith, C. D. W. Wilkinson, T. F. Krauss, H. Benisty, C. Weisbuch, D. Labilloy, U. Oesterle, M. Ilegems, R. Houdré, V. N. Astratov, and M. S. Skolnik, "Waveguide photonic crystals and microstructures," *24th Australian Conference on Optical Fibre Technology (ACOFT '99)*, Sydney, Australia, 1999.
148. C. J. M. Smith, H. Benisty, M. Rattier, D. Labilloy, T. F. Krauss, R. M. De La Rue, U. Oesterle, R. Houdré, and C. Weisbuch, "Directional effects in photonic bandgap cavities," *12th Annual Meeting. IEEE Lasers and Electro-Optics Society (LEOS'99)*, San Francisco, USA, 1999.
147. H. Benisty, D. Labilloy, C. Weisbuch, T. F. Krauss, C. J. M. Smith, R. M. De La Rue, R. Houdré, and U. Oesterle, "Waveguide photonic-crystal microcavities," *9th European Conference on Integrated Optics and Technical Exhibition (ECIO'99)*, Turin, Italy, 1999.
146. D. Labilloy, H. Benisty, C. Weisbuch, T. F. Krauss, C. J. M. Smith, R. M. De La Rue, D. Cassagne, C. Jouanin, R. Houdré, and U. Oesterle, "Measuring the optical properties of two-dimensional photonic crystals in the near-infrared," in *Confined Photon systems. Fundamentals and applications, lecture notes of QED phenomena and applications of microcavities and photonic crystals*, Cargèse, Corsica, France, 1998, Lectures notes in Physics **531**, H. Benisty, J. M. Gérard, R. Houdré, J. Rarity, and C. Weisbuch, eds. (Springer, Berlin, 1999), pp. 406-425, invited communication.

1998

145. J. Wainstain, C. Delalande, M. Voos, J. Bloch, V. Thierry-Mieg, R. Planel, R. Houdré, R. P. Stanley, and U. Oesterle, "Photoluminescence efficiency of semiconductor-microcavity-polaritons far from resonance," *Solid State Commun.* **106**, 711-714 (1998).

144. R. P. Stanley, R. Houdré, U. Oesterle, and M. Ilegems, "Photoquenching of excitonic inhomogeneous linewidth in semiconductor microcavities," *Solid State Commun.* **106**, 485-489 (1998).
143. F. Quochi, G. Bongiovanni, A. Mura, J. L. Staehli, B. Deveaud, R. P. Stanley, U. Oesterle, and R. Houdré, "Strongly driven semiconductor microcavities: From the polariton doublet to an AC Stark triplet," *Phys. Rev. Lett.* **80**, 4733-4736 (1998).
142. C. Ell, J. Prineas, T. R. Nelson, S. Park, H. M. Gibbs, G. Khitrova, S. W. Koch, and R. Houdré, "Influence of structural disorder and light coupling on the excitonic response of semiconductor microcavities," *Phys. Rev. Lett.* **80**, 4795-4798 (1998).
141. G. R. Hayes, S. Haacke, M. Kauer, R. P. Stanley, R. Houdré, U. Oesterle, and B. Deveaud, "Resonant Rayleigh scattering versus incoherent luminescence in semiconductor microcavities," *Phys. Rev. B* **58**, R10175-R10178 (1998).
140. A. L. Bradley, J. P. Doran, T. Aherne, J. Hegarty, R. P. Stanley, R. Houdré, U. Oesterle, and M. Ilegems, "Nonlinear reflectivity of semiconductor microcavities in the weak- and strong-coupling regimes: Experiment and theory," *Phys. Rev. B* **57**, 9957-9964 (1998).
139. G. Bongiovanni, A. Mura, F. Quochi, J. L. Staehli, R. P. Stanley, U. Oesterle, and R. Houdré, "Exciton-photon dynamics in weakly and strongly excited semiconductor microcavities," *Phys. Status Solidi B* **206**, 375-386 (1998), *5th International Workshop on Nonlinear Optics and Excitation Kinetics in Semiconductors (NOEKS 5)*, Graal Muritz, Germany, 1997.
138. D. Paget, B. Kierren, and R. Houdré, "Photoreflectance spectroscopy investigation of two-dimensional cesium metallic clusters on GaAs(100)," *J. Vac. Sci. Technol. A* **16**, 2350-2359 (1998).
137. C. J. M. Smith, R. M. De la Rue, H. Benisty, U. Oesterle, T. F. Krauss, D. Labilloy, C. Weisbuch, and R. Houdré, "In-plane microcavity resonators with two-dimensional photonic bandgap mirrors," *IEE Proc.: Optoelectron.* **145**, 373-378 (1998).
136. D. Labilloy, H. Benisty, C. Weisbuch, T. F. Krauss, C. J. M. Smith, R. Houdré, and U. Oesterle, "High-finesse disk microcavity based on a circular Bragg reflector," *Appl. Phys. Lett.* **73**, 1314-1316 (1998).
135. G. R. Hayes, S. Haacke, M. Kauer, R. P. Stanley, R. Houdré, U. Oesterle, and B. Deveaud, "Resonant Rayleigh scattering versus incoherent luminescence in semiconductor microcavities," *Third International Conference on Excitonic Processes in Condensed Matter (EXCON'98)*, Boston, USA, 1998, R. T. Williams, and W. M. Yen, eds. (Electrochemical Society, Pennington, NJ, USA), pp. 28-33.
134. A. L. Bradley, L. A. Dunbar, J. Hegarty, R. P. Stanley, U. Oesterle, R. Houdré, M. Ilegems, and J. P. Doran, "Dephasing of strongly coupled exciton-photon systems," *Third International Conference on Excitonic Processes in Condensed Matter (EXCON'98)*, Boston, USA, 1998, R. T. Williams, and W. M. Yen, eds. (Electrochemical Society, Pennington, NJ, USA), pp. 10-19.
133. R. Houdré, R. P. Stanley, U. Oesterle, and M. Ilegems, "Recent results on sub-meV linewidth cavity-polariton," *Radiative Processes and Dephasing in Semiconductors*, Coeur d'Alène, USA, 1998, invited communication.
132. H. M. Gibbs, C. Ell, G. Khitrova, J. Prineas, T. R. Nelson, J. S. Park, E. Lee, R. Houdré, and S. W. Koch, "Linewidths of normal mode coupling microcavities," *Radiative Processes and Dephasing in Semiconductors*, Coeur d'Alène, USA, 1998, invited communication.
131. R. P. Stanley, R. Houdré, U. Oesterle, and M. Ilegems, "Coherent and Incoherent dynamics of strong coupling microcavities," *Quantum Electronics Conference (IQEC 98)*, San Francisco, USA, 1998, invited communication.

130. D. Labilloy, H. Benisty, T. F. Krauss, U. Oesterle, and R. Houdré, "Issues in the control of guided waves by three-dimensional photonic bandgaps for optoelectronics," *Progress in Electromagnetism Research Symposium*, Nantes, France, 1998, invited communication.
129. R. Houdré, "Acoustic phonon scattering in sub-meV linewidth cavity-polariton," *Phantoms Strategic Domain Meetings (Phasdoms 98)*, Neuchatel, Switzerland, 1998, invited communication.
128. D. Labilloy, H. Benisty, C. Weisbuch, T. F. Krauss, U. Oesterle, and R. Houdré, "Measurements of two-dimensional photonic bandgaps for applications in integrated optics: diffraction and cavity modes," *March Meeting of the American Physical Society*, Los Angeles, USA, 1998.
127. C. J. M. Smith, H. Benisty, D. Labilloy, U. Oesterle, R. Houdré, T. F. Krauss, R. M. De La Rue, and C. Weisbuch, "Two-dimensional photonic bandgap mirrors for in-plane microcavities," *Lasers and electro-optics Society annual meeting (LEOS'98)*, Orlando, USA, 1998.
126. D. Labilloy, H. Benisty, C. Weisbuch, C. J. M. Smith, T. F. Krauss, R. M. De La Rue, U. Oesterle, and R. Houdré, "Control of guided spontaneous emission by one and two dimensional photonic bandgap structures," *Lasers and electro-optics Society annual meeting (LEOS'98)*, Orlando, USA, 1998.
125. D. Labilloy, H. Benisty, C. Weisbuch, R. M. De La Rue, U. Oesterle, and R. Houdré, "Light control by two-dimensional photonic bandgap lattices," *International Quantum Electronics Conference (IQEC 98)*, San Francisco, USA, 1998 (OSA Tech. Dig. Ser., Washington DC, USA).
124. C. Ell, J. Prineas, T. R. Nelson, Jr., S. Park, H. M. Gibbs, G. Khitrova, S. W. Koch, and R. Houdré, "Disorder-averaged excitonic response and its application to normal-mode coupling in semiconductor microcavities within a linear dispersion theory," *International Quantum Electronics Conference (IQEC 98)*, San Francisco, CA, USA, 1998 (OSA Tech. Dig. Ser., Washington DC, USA), **7**, p. 256.
123. A. L. Bradley, L. A. Dunbar, J. P. Doran, J. Hegarty, R. P. Stanley, R. Houdré, U. Oesterle, and M. Ilegems, "Investigation of acoustic phonon scattering in a strongly coupled semiconductor microcavity," *European Quantum Electronics Conference (1998 EQEC Europe)*, Glasgow, Scotland, United Kingdom, 1998.
122. D. Labilloy, H. Benisty, C. Weisbuch, T. F. Krauss, C. J. M. Smith, R. Houdré, and U. Oesterle, "Microdisks with circular photonic bandgap boundaries exhibiting high-quality low-order modes," *European Conference on Lasers and Electro-Optics (CLEO Europe 98)*, Glasgow, United Kingdom, 1998.
- 1997**
121. R. Houdré, V. Berger, and C. Weisbuch, "Semiconductor laser having a photonic bandgap material", USA, Application No Patent No. US00568817 (1997).
120. J. Wainstain, G. Cassabois, P. Roussignol, C. Delalande, M. Voos, F. T. Assone, R. Houdré, R. P. Stanley, and U. Oesterle, "Relaxation of microcavity polariton," *Superlattice Microstruct.* **22**, 389-392 (1997).
119. D. Labilloy, H. Benisty, C. Weisbuch, T. F. Krauss, R. M. DeLaRue, V. Bardinal, R. Houdré, U. Oesterle, D. Cassagne, and C. Jouanin, "Quantitative measurement of transmission, reflection, and diffraction of two-dimensional photonic band gap structures at near-infrared wavelengths," *Phys. Rev. Lett.* **79**, 4147-4150 (1997).
118. J. Tignon, R. Ferreira, J. Wainstain, C. Delalande, P. Voisin, M. Voos, R. Houdré, U. Oesterle, and R. P. Stanley, "Magnetopolaritons in a semiconductor quantum well microcavity," *Phys. Rev. B* **56**, 4068-4074 (1997).

117. R. P. Stanley, S. Pau, U. Oesterle, R. Houdré, and M. Ilegems, "Resonant photoluminescence of semiconductor microcavities: The role of acoustic phonons in polariton relaxation," *Phys. Rev. B* **55**, R4867-R4870 (1997).
116. G. Bongiovanni, A. Mura, F. Quochi, S. Gurtler, J. L. Staehli, F. Tassone, R. P. Stanley, U. Oesterle, and R. Houdré, "Coherent exciton-photon dynamics in semiconductor microcavities: The influence of inhomogeneous broadening," *Phys. Rev. B* **55**, 7084-7090 (1997).
115. F. Quochi, G. Bongiovanni, A. Mura, J. L. Staehli, R. P. Stanley, U. Oesterle, and R. Houdré, "Optical stark effect and coherent gain of excitons in a semiconductor microcavity," *Phys. Status Solidi A* **164**, 23-27 (1997), *5th International Meeting on Optics of Excitons in Confined Systems (OECS 5)*, Göttingen, Germany, 1997.
114. P. Pellandini, R. P. Stanley, R. Houdré, U. Oesterle, M. Ilegems, and C. Weisbuch, "Dual-wavelength laser emission from a coupled semiconductor microcavity," *Appl. Phys. Lett.* **71**, 864-866 (1997).
113. D. Labilloy, H. Benisty, C. Weisbuch, T. F. Krauss, R. Houdré, and U. Oesterle, "Use of guided spontaneous emission of a semiconductor to probe the optical properties of two-dimensional photonic crystals," *Appl. Phys. Lett.* **71**, 738-740 (1997).
112. C. Weisbuch, H. Benisty, D. Labilloy, R. Houdré, R. P. Stanley, and M. Ilegems, "Confined electrons and photons - A domain where new physical phenomena, device concepts and widescale applications converge," *Nanoscale Science and Technology*, Toledo, Spain, 1997, N. Garcia, M. Nieto-Vesperinas, and H. Rohrer, eds. (NATO Advanced Research Workshop, Kluwer, Dordrecht), **348**, pp. 211-234 (1998), invited communication.

1996

111. J. Tignon, P. Voisin, J. Wainstain, C. Delalande, M. Voos, R. Houdré, U. Oesterle, and R. P. Stanley, "Semiconductor microcavity under magnetic field: From the weak coupling to the strong coupling regime," *Solid-State Electron.* **40**, 497-500 (1996), *7th International Conference on Modulated Semiconductor Structures (MSS-7)*, Madrid, Spain, 1995.
110. J. Wainstain, C. Delalande, M. Voos, R. Houdré, R. P. Stanley, and U. Oesterle, "Photoluminescence intensity in a semiconductor microcavity," *Solid State Commun.* **99**, 317-321 (1996).
109. R. P. Stanley, R. Houdré, C. Weisbuch, U. Oesterle, and M. Ilegems, "Cavity-polariton photoluminescence in semiconductor microcavities: Experimental evidence," *Phys. Rev. B* **53**, 10995-11007 (1996).
108. R. Houdré, R. P. Stanley, and M. Ilegems, "Vacuum-field Rabi splitting in the presence of inhomogeneous broadening: Resolution of a homogeneous linewidth in an inhomogeneously broadened system," *Phys. Rev. A* **53**, 2711-2715 (1996).
107. C. Weisbuch, R. Houdré, and R. Stanley, "Recent progress in semiconductor microcavities," *Phys. Scr.* **T66**, 121-125 (1996), *15th General Conference of the Condensed Matter Division of the European-Physical-Society*, Baveno Stresa, Italy, 1996.
106. J. P. Doran, A. L. Bradley, B. Roycroft, T. Aherne, J. Hegarty, R. P. Stanley, R. Houdré, U. Oesterle, and M. Ilegems, "Semiconductor microcavities: Physics and applications of strong and weak coupling," *Symposium on High Speed III-V Electronics for Wireless Applications*, San Antonio, Texas, USA, 1996, F. Ren, C. S. Wu, S. N. G. Chu, and S. J. Pearton, eds. (Electrochemical Society, Pennington, NJ, USA), pp. 333-340.
105. A. L. Bradley, J. P. Doran, T. Aherne, J. Hegarty, R. P. Stanley, R. Houdré, U. Oesterle, and M. Ilegems, "Nonlinear reflectivity of semiconductor microcavities in the weak- and strong-

coupling regimes: Experiment and theory," *European Quantum Electronics Conference (CLEO/Europe-EQEC)*, Hamburg, Germany, 1996, invited communication.

104. P. Pellandini, R. P. Stanley, R. Houdré, U. Oesterle, M. Ilegems, and C. Weisbuch, "Two-wavelength laser emission from a coupled semiconductor microcavity," *Conference on Lasers and Electro-Optics Europe (CLEO Europe)*, Hamburg, Germany, 1996 (IEEE Tech. Dig.), p. 28.

103. F. Quochi, G. Bongiovanni, A. Mura, S. Gurtler, C. Dill, R. Houdré, and J. Staehli, "Four-wave mixing response of a semiconductor microcavity: the influence of strong excitonic inhomogeneous broadening," *23rd International Conference on the Physics of Semiconductors (ICPS)*, Berlin, Germany, 1996 (World Scientific, Singapore), **4**, pp. 3151-3154 (1996).

102. R. Houdré, R. P. Stanley, C. Weisbuch, U. Oesterle, and M. Ilegems, "Quantum optics in semiconductor microcavities," *23rd International Conference on the Physics of Semiconductors (ICPS)*, Berlin, Germany, 1996 (World Scientific, Singapore), **4**, pp. 3071-3078 (1996), invited communication.

101. R. Houdré, R. P. Stanley, U. Oesterle, M. Ilegems, and C. Weisbuch, "Strong coupling effects on the emission properties of semiconductor microcavities," *20th International Quantum Electronics Conference (IQEC'96)*, Sydney, Australia, 1996.

100. R. P. Stanley, and R. Houdré, "Light emission from excitons in microcavities," *9th International Conference on Superlattices, Microstructures and Microdevices (ICSMM)*, Liège, Belgium, 1996, invited communication.

99. D. Labilloy, H. Benisty, T. F. Krauss, R. Houdré, and C. Weisbuch, "Effet d'un matériau à bande interdite photonique bidimensionnel sur l'émission spontanée d'un semiconducteur III-V," *5èmes Journées de la Matière Condensée*, Orléans, France, 1996.

1995

98. R. Houdré, C. Weisbuch, and V. Berger, "Laser à semiconducteurs à bande interdite photonique", Europe, Application No Patent No. EP 0 742 620 A1 (1995).

97. R. Houdré, V. Berger, J. P. Pocholle, and C. Weisbuch, "Laser à bande interdite photonique", France, Application No Patent No. SPCI#X006314, FR 9505990 (1995).

96. J. Tignon, P. Voisin, C. Delalande, M. Voos, R. Houdré, U. Oesterle, and R. P. Stanley, "From Fermi Golden-Rule to the Vacuum Rabi Splitting : Magnetopolaritons in a Semiconductor Optical Microcavity," *Phys. Rev. Lett.* **74**, 3967-3970 (1995).

95. B. Jeanneret, B. D. Hall, H. J. Bühlmann, R. Houdré, M. Ilegems, B. Jeckelmann, and U. Feller, "Observation of the Integer Quantum Hall-Effect by Magnetic Coupling to a Corbino Ring," *Phys. Rev. B* **51**, 9752-9756 (1995).

94. R. Houdré, J. L. Gibernon, P. Pellandini, R. P. Stanley, U. Oesterle, C. Weisbuch, J. Ogorman, B. Roycroft, and M. Ilegems, "Saturation of the Strong-Coupling Regime in a Semiconductor Microcavity - Free-Carrier Bleaching of Cavity Polaritons," *Phys. Rev. B* **52**, 7810-7813 (1995).

93. R. P. Stanley, R. Houdré, U. Oesterle, and M. Ilegems, "Excitons in microcavities: Cavity polariton photoluminescence," *Nuovo Cimento Soc. Ital. Fis., D* **17**, 1323-1332 (1995), *IV International Conference on Optics of Excitons in Confined Systems*, Cortona, Italy, 1995, invited communication.

92. U. Oesterle, R. P. Stanley, R. Houdré, M. Gailhanou, and M. Ilegems, "Molecular-Beam Epitaxy Growth of an Ultrahigh Finesse Microcavity," *J. Crystal Growth* **150**, 1313-1317 (1995), *8th International Conference on Molecular Beam Epitaxy (MBE 8)*, Osaka Toyonaka, Japan.

91. A. Gustafsson, D. Hessman, L. Samuelson, J. F. Carlin, R. Houdré, and A. Rudra, "Cathodoluminescence Investigations of 3-Dimensional Island Formation in Inas/Inp Quantum-Wells," *J. Crystal Growth* **147**, 27-34 (1995).
90. L. Pavesi, R. Houdré, and P. Giannozzi, "Strain and Alloying Effects on the Electronic and Vibrational Properties of $\text{In}_y\text{Al}_{1-y}\text{as}$ on InP," *J. Appl. Phys.* **78**, 470-477 (1995).
89. B. Jeanneret, B. Jeckelmann, H. J. Bühlmann, R. Houdré, and M. Ilegems, "Influence of the Device-Width on the Accuracy of Quantization in the Integer Quantum Hall-Effect," *IEEE Trans. Instrum.* **44**, 254-257 (1995), *1994 Conference on Precision Electromagnetic Measurements (CPEM 94)*, Boulder, USA, 1994.
88. J. Tignon, P. Voisin, J. Wainstain, C. Delalande, M. Voos, R. Houdré, U. Oesterle, and R. P. Stanley, "Microcavités de semiconducteurs sous champs magnétique: de la règle d'or de Fermi au splitting de Rabi / Semiconductor microcavity in a magnetic field: From Fermi's golden rule to Rabi's splitting," *Ann. Phys. Fr.* **20**, 541-547 (1995), *4th Colloquium on Lasers and Quantum Optics*, Palaiseau, France, 1995.
87. R. Houdré, "Systèmes photoniques de basse dimensionalité / Photon systems of low dimensionality," *Ann. Phys. Fr.* **20**, **Suppl. 2**, 285-290 (1995), *Symposium Claude Benoit à la Guillaume, Effets radiatifs dans les semiconducteurs*, Paris, France, 1995, invited communication.
86. R. Houdré, C. Weisbuch, R. P. Stanley, U. Oesterle, P. Pellandini, and M. Ilegems, "Luminescence processes in semiconductor microcavities," *Topical Meeting Quantum Optoelectronics*, Dana Point, USA, 1995 (OSA Tech. Dig. Ser.), **14**, pp. 57-59.
85. R. P. Stanley, R. Houdré, U. Oesterle, P. Pellandini, and M. Ilegems, "Cavity-polaritons in semiconductor microcavities," *Microcavities and Photonic Bandgaps: Physics and Applications*, Cargèse, Corsica, France, 1995, J. Rarity, and C. Weisbuch, eds. (NATO Advanced Study Institute, Kluwer, Dordrecht), **324**, pp. 11-32 (1996), invited communication.
84. R. Houdré, R. P. Stanley, U. Oesterle, P. Pellandini, and M. Ilegems, "Critical issues on the strong coupling regime in semiconductor microcavities," *Microcavities and Photonic Bandgaps: Physics and Applications*, Cargèse, Corsica, France, 1995, J. Rarity, and C. Weisbuch, eds. (NATO Advanced Study Institute, Kluwer, Dordrecht), **324**, pp. 33-42 (1996), invited communication.
83. J. P. Doran, A. L. Bradley, B. Roycroft, T. Aherne, J. Hegarty, R. P. Stanley, R. Houdré, U. Oesterle, and M. Ilegems, "Dynamical studies of cavity polaritons in semiconductor microcavities - Pump probe measurements and time-resolved photoluminescence," *Microcavities and Photonic Bandgaps: Physics and Applications*, Cargèse, Corsica, France, 1995, J. Rarity, and C. Weisbuch, eds. (NATO Advanced Study Institute, Kluwer, Dordrecht), **324**, pp. 59-67 (1996), invited communication.
82. R. Houdré, R. P. Stanley, U. Oesterle, M. Ilegems, and C. Weisbuch, "Optical properties of semiconductor microcavities: from Fermi's golden rule to cavity-polariton," *International Conference on Semiconductor Heteroepitaxy*, Montpellier, France, 1995, B. Gil, and R. L. Aulombard, eds. (World Scientific, Singapore), pp. 399-404 (1996), invited communication.
81. C. Weisbuch, R. Houdré, and R. P. Stanley, "Cavity QED with semiconductor microcavities," *19th International Conference on Laser Spectroscopy*, Capri, Italy, 1995, M. Inguscio, M. Allegrini, and A. Sasso, eds. (World Scientific, Singapore), p. 446 (1996).
80. C. Weisbuch, R. Houdré, and R. P. Stanley, "Microcavities and semiconductors: the strong coupling regime," in *Spontaneous Emission and Laser Oscillation in Microcavities*, W. Yokoyama, and K. Ujihara, eds. (CRC, New York, 1995), pp. 109-150

1994

79. R. Houdré, C. Weisbuch, R. P. Stanley, U. Oesterle, P. Pellandini, and M. Ilegems, "Measurement of Cavity Polariton Dispersion Curve," *Superlattice Microstruct.* **15**, 263-267 (1994), *7th International Conference on Superlattices, Microstructures and Microdevices (ICSMM 7)*, Banff, Canada, 1994.
78. R. Houdré, C. Weisbuch, R. P. Stanley, U. Oesterle, P. Pellandini, and M. Ilegems, "Measurement of Cavity-Polariton Dispersion Curve from Angle-Resolved Photoluminescence Experiments," *Phys. Rev. Lett.* **73**, 2043-2046 (1994).
77. R. Houdré, R. P. Stanley, U. Oesterle, M. Ilegems, and C. Weisbuch, "Room-Temperature Cavity Polaritons in a Semiconductor Microcavity," *Phys. Rev. B* **49**, 16761-16764 (1994).
76. H. Sigg, P. Christianen, R. Houdré, and A. Rudra, "Magneto Luminescence of as-Grown InAs/Inp Quantum-Well Islands," *Phys. Scr.* **54**, 81-83 (1994), *16th Nordic Semiconductor Meeting, Laugarvath, Iceland*, 1994.
75. A. Rudra, R. Houdré, J. F. Carlin, and M. Ilegems, "Dynamics of Island Formation in the Growth of InAs/Inp Quantum-Wells," *J. Crystal Growth* **136**, 278-281 (1994), *4th International Conference on Chemical Beam Epitaxy and Related Growth Techniques*, Nara, Japan, 1993.
74. R. P. Stanley, R. Houdré, U. Oesterle, M. Ilegems, and C. Weisbuch, "Coupled Semiconductor Microcavities," *Appl. Phys. Lett.* **65**, 2093-2095 (1994).
73. R. P. Stanley, R. Houdré, U. Oesterle, M. Gailhanou, and M. Ilegems, "Ultrahigh Finesse Microcavity with Distributed Bragg Reflectors," *Appl. Phys. Lett.* **65**, 1883-1885 (1994).
72. J. M. Sallese, S. Taylor, H. J. Bühlmann, J. F. Carlin, A. Rudra, R. Houdré, and M. Ilegems, "As/P Interdiffusion in Ultrathin InAs/InP Strained Quantum Wells," *Appl. Phys. Lett.* **65**, 341-343 (1994).
71. J. M. Sallese, S. Taylor, H. J. Bühlmann, J. F. Carlin, A. Rudra, R. Houdré, and M. Ilegems, "As/P Interdiffusion in Ultrathin InAs/InP Strained Quantum Wells (Vol 65, Pg 341, 1994)," *Appl. Phys. Lett.* **65**, 1596-1596 (1994), *erratum*.
70. R. Houdré, R. P. Stanley, U. Oesterle, M. Ilegems, and C. Weisbuch, "Optical studies of cavity-polariton," *March Meeting of the American Physical Society*, Pittsburgh, Pennsylvania, USA, 1994.
69. R. P. Stanley, R. Houdré, U. Oesterle, M. Ilegems, C. Weisbuch, V. Savona, A. Quattropani, and P. Schwendimann, "Photoluminescence from semiconductor microcavities in the cavity-polariton régime," *22nd International Conference on the Physics of Semiconductors (ICPS)*, Vancouver, Canada, 1994, D. J. Lockwood, ed. (World Scientific, Singapore), pp. 1244-1247 (1995).
68. R. Houdré, R. P. Stanley, U. Oesterle, M. Ilegems, and C. Weisbuch, "Le régime de couplage fort dans les microcavités semiconductrices et ses applications potentielles," *5èmes journées nationales de microélectronique et d'optoélectroniques III-V*, Lyon, France, 1994, invited communication.

1993

67. R. Houdré, J. F. Carlin, A. Rudra, J. Ling, and M. Ilegems, "Formation and optical properties of islands in ultra-thin InAs/InP quantum wells grown by chemical beam epitaxy," *Superlattice Microstruct.* **13**, 67-70 (1993), *6th International Conference on Superlattices, Microstructures and Microdevices (ICSMM)*, Xi'an, China, 1992.
66. M. W. Berz, R. Houdré, E. F. Steigmeier, and F. K. Reinhart, "Optical Anisotropy Due to Exciton Polaritons in Al_{1-x}Ga_xAs Quantum-Wells," *Solid State Commun.* **86**, 43-46 (1993).

65. M. Marsi, R. Houdré, A. Rudra, M. Ilegems, F. Gozzo, C. Coluzza, and G. Margaritondo, "Artificial Band Discontinuities at GaAs Homojunctions," *Phys. Rev. B* **47**, 6455-6459 (1993).
64. R. P. Stanley, R. Houdré, U. Oesterle, and M. Ilegems, "Impurity Modes in One-Dimensional Periodic-Systems - the Transition from Photonic Band-Gaps to Microcavities," *Phys. Rev. A* **48**, 2246-2250 (1993).
63. R. Houdré, R. P. Stanley, U. Oesterle, M. Ilegems, and C. Weisbuch, "Room-Temperature Exciton-Photon Rabi Splitting in a Semiconductor Microcavity," *J. Phys. IV* **3**, 51-58 (1993), *3rd International Conference on Optics of Excitons in Confined Systems (OECS 3)*, Montpellier, France, 1993, invited communication.
62. B. Orschel, G. Oelgart, R. Houdré, M. Proctor, and F. K. Reinhart, "Interface Roughness in Quantum-Wells Prepared with Growth Interruptions," *Appl. Phys. Lett.* **62**, 843-845 (1993).
61. F. Vasey, F. K. Reinhart, R. Houdré, and J. M. Stauffer, "Spatial Optical Beam Steering with an AlGaAs Integrated Phased-Array," *Appl. Opt.* **32**, 3220-3232 (1993).
60. A. Muller, C. A. Berseth, R. Houdré, U. Oesterle, and C. Wüthrich, "Pumping and characterization of active fibers," *AGEN Mitteilungen* **56/57**, 83-86 (1993).
59. R. Houdré, E. Tuncel, and J. L. Staehli, "Growth and Characterization of Ultra-Thin InAs/GaAs Quantum Wells," *SPIE 2nd International Symposium on Physical Concepts and Materials for Novel Optoelectronic Device Applications*, Trieste, Italy, 1993 (SPIE Proc.), **1985**, pp. 118-124.
58. R. Houdré, R. P. Stanley, U. Oesterle, and M. Ilegems, "The transition from photonic bandgap to microcavities, a one-dimensional unified model," *Quantum Optoelectronic meeting*, Palm Spring, USA, 1993, (post deadline).
57. R. P. Stanley, R. Houdré, and U. Oesterle, "Impurity modes in one dimensional periodic systems: The transition from photonic band gaps to microcavities," *Confined Electrons and Photons - New Physics and Applications*, Erice, Italy, 1993, C. Weisbuch, and E. Burstein, eds. (NATO Advanced Study Institute, Plenum, New York), **340**, pp. 735-739 (1995).
56. R. Houdré, R. P. Stanley, and U. Oesterle, "Vacuum field Rabi splitting in a semiconductor microcavity," *Confined Electrons and Photons - New Physics and Applications*, Erice, Italy, 1993, C. Weisbuch, and E. Burstein, eds. (NATO Advanced Study Institute, Plenum, New York), **340**, pp. 729-734 (1995).
- 1992**
55. L. Pavesi, G. Mariotto, J. F. Carlin, A. Rudra, and R. Houdré, "Raman-Study of a Single InP/InAs/InP Strained Quantum Well," *Solid State Commun.* **84**, 705-709 (1992).
54. R. Houdré, U. Oesterle, C. Wuthrich, C. A. Berseth, M. Gailhanou, and J. Faist, "InGaAs/GaAs vertical cavity surface emitting laser with hybrid top mirror," *Microelectron. Eng.* **18**, 267-272 (1992), *European Solid State Device Conference*, Montreux, Switzerland, 1991 (post deadline).
53. J. F. Carlin, A. Rudra, R. Houdré, P. Ruterana, and M. Ilegems, "Effect of Growth Interruptions on Ultra-Thin InAs/InP Quantum-Wells Grown by Chemical Beam Epitaxy," *J. Crystal Growth* **120**, 155-156 (1992), *3rd International Conf. on Chemical Beam Epitaxy and Related Growth Techniques (ICCBE-3)*, Oxford, England (UK), 1991.
52. M. W. Berz, R. Houdré, L. C. Andreani, E. F. Steigmeier, and F. K. Reinhart, "Exchange and Polariton Effects for Excitons in Al_{1-x}Ga_xAs-GaAs Quantum-Wells," *Helv. Phys. Acta* **65**, 329-330 (1992), *1st International Conference on Physics in Two Dimensions*, Neuchâtel, Switzerland, 1991.

51. H. Gentner, C. Hermann, G. Lampel, and R. Houdré, "Photoemission from AlGaAs/GaAs Superlattices," *Appl. Surf. Sci.* **56-58**, 632-636 (1992), *3rd International Conference on the Formation of Semiconductor Interfaces (ICFSI-3)*, Rome, Italy, 1991.
50. F. Gueissaz, M. Gailhanou, R. Houdré, and M. Ilegems, "Measurements of Al-AlInAs Schottky Barriers Prepared *in situ* by Molecular Beam Epitaxy," *Appl. Phys. Lett.* **60**, 1099-1101 (1992).
49. M. Marsi, R. Houdré, M. Ilegems, F. Gozzo, C. Coluzza, and G. Margaritondo, "Artificial GaAs-GaAs band discontinuities," *39th National American Vacuum Society Symposium and Topical Conferences*, Chicago, USA, 1992.
48. R. Houdré, L. Pavesi, M. Gailhanou, and M. Ilegems, "Strain influence on the optical and vibrational properties of $\text{In}_y\text{Al}_{(1-y)}\text{As}$ ($y = 0.22$ to 0.60) on InP," *21st International Conference on the Physics of Semiconductors (ICPS)*, Beijing, China, 1992, P. Jiang, and H.-Z. Zheng, eds. (World Scientific, Singapore), pp. 161-164 (1992).
47. T. H. Gentner, C. Hermann, G. Lampel, and R. Houdré, "Polarized electrons from AlGaAs/GaAs superlattices," *21st International Conference on the Physics of Semiconductors (ICPS)*, Beijing, China, 1992, P. Jiang, and H.-Z. Zheng, eds. (World Scientific, Singapore), pp. 697-700 (1992).
46. H. J. Drouhin, P. Bréchet, H. Gentner, C. Hermann, R. Houdré, G. Lampel, Y. Lassailly, D. Paget, and J. Peretti, "Photoelectronic process in semiconductors activated to negative electron affinity," *21st International Conference on the Physics of Semiconductors (ICPS)*, Beijing, China, 1992, P. Jiang, and H.-Z. Zheng, eds. (World Scientific, Singapore), pp. 469-476 (1992), invited communication.
45. M. Marsi, R. Houdré, M. Ilegems, F. Gozzo, C. Coluzza, and G. Margaritondo, "Artificial GaAs-GaAs band discontinuities," *12th International Vacuum Congress and 8th International Conference on Solid Surface*, The Hague, Netherlands, 1992.
44. C. Hermann, H. J. Drouhin, G. Lampel, Y. Lassailly, D. Paget, J. Peretti, R. Houdré, F. Ciccacci, and H. Riechert, "Photoelectronic processes in semiconductors activated to negative electron affinity," in *Spectroscopy of nonequilibrium electrons and phonons, Modern problems in solid state physics*, C. V. Shank, and B. P. Zakharchenya, eds. (Elsevier Science, 1992), pp. 397-460

1991

43. R. Houdré, F. Gueissaz, M. Gailhanou, J. D. Ganière, A. Rudra, and M. Ilegems, "Characterization of InGaAs and InAlAs Layers on InP by 4-Crystal High-Resolution X-Ray-Diffraction and Wedge Transmission Electron-Microscopy," *J. Crystal Growth* **111**, 456-460 (1991), *6th International Conf. on Molecular Beam Epitaxy*, La Jolla, CA, USA, 1990.
42. F. Gueissaz, R. Houdré, and M. Ilegems, "High Electron-Density and Mobility in Single and Double Planar Doped InGaAs/InAlAs Heterojunctions on InP," *J. Crystal Growth* **111**, 470-474 (1991), *6th International Conf. on Molecular Beam Epitaxy*, La Jolla, CA, USA, 1990.
41. J. F. Carlin, A. Rudra, R. Houdré, J. L. Staehli, and M. Ilegems, "Growth of GaInAs by Chemical Beam Epitaxy," *J. Crystal Growth* **107**, 1057-1059 (1991), *5th International Conf. on Metalorganic Vapor Phase Epitaxy / Workshop on Metalorganic Beam Epitaxy, Chemical Beam Epitaxy and Gas Source Molecular Beam Epitaxy*, Aachen, Fed Rep. Ger., 1990.
40. D. Araújo, J. D. Ganière, R. Houdré, and F. K. Reinhart, "Cathodoluminescence Study of Oval Defects on QW Structures," *Inst. Phys. Conf. Ser.* **117**, 703-706 (1991), *7th Conference of Microscopy of Semiconducting Materials*, Oxford, United Kingdom, 1991.
39. D. Jucknischke, H. J. Bühlmann, R. Houdré, M. Ilegems, M. A. Py, B. Jeckelmann, and W. Schwitz, "Properties of Alloyed Augeni-Contacts on GaAs/GaAlAs-Heterostructures," *IEEE Trans.*

Instrum. **40**, 228-230 (1991), *7th Conference on Precision Electromagnetic Measurement*, Ottawa, Canada, 1990.

38. B. Jeckelmann, W. Schwitz, H. J. Bühlmann, R. Houdré, M. Ilegems, D. Jucknischke, and M. A. Py, "Comparison of the Quantized Hall Resistance in Different GaAs/Al_xGa_{1-x}As Heterostructures," *IEEE Trans. Instrum.* **40**, 231-233 (1991), *7th Conference on Precision Electromagnetic Measurement (CPEM)*, Ottawa, Canada, 1990.

37. F. Gueissaz, R. Houdré, and M. Ilegems, "DC and RF Characteristics of InAlAs/InGaAs Dual-Gate TEGFETs," *Electron. Lett.* **27**, 631-632 (1991).

36. F. Vasey, F. K. Reinhart, R. Houdré, and J. M. Stauffer, "Electrooptic AlGaAs Spatial Light Deflector Modulator Based on a Grating Phased-Array," *Appl. Phys. Lett.* **58**, 2874-2876 (1991).

35. J. F. Carlin, R. Houdré, A. Rudra, and M. Ilegems, "Island Formation in Ultra-Thin InAs/InP Quantum-Wells Grown by Chemical Beam Epitaxy," *Appl. Phys. Lett.* **59**, 3018-3020 (1991).

34. F. Vasey, F. K. Reinhart, R. Houdré, and J. M. Stauffer, "Continuous optical beam steering with an AlGaAs integrated phased array," *Conference on Lasers and Electro-Optics (CLEO)*, Baltimore, USA, 1991.

33. F. Gueissaz, R. Houdré, and M. Ilegems, "Performance of dual-gate AlInAs/GaInAs/InP TEGFETs (DC to microwave)," *15th European Workshop on Compound Semiconductor Devices and Integrated Circuits*, Grönenbach, West Germany, 1991.

32. F. Gueissaz, R. Houdré, and M. Ilegems, "Characterization of nearly ideal Schottky contacts on n-doped AlInAs usable for high performance AlInAs/GaInAs/InP MODFET applications," *1st International Semiconductor Device Research Symposium*, Charlottesville, USA, 1991.

1990

31. R. Houdré, and H. Morkoc, "Properties of GaAs on Si Grown by Molecular-Beam Epitaxy," *Crit. Rev. Solid. State. Mat. Sci.* **16**, 91-114 (1990).

30. F. Vasey, F. K. Reinhart, R. Houdré, and J. M. Stauffer, "Electrooptic AlGaAs digital spatial light deflector/modulator based on a grating phased array," *Annual meeting of the Lasers and Electro-Optics Society (LEOS'90)*, Boston, USA, 1990.

29. F. Gueissaz, R. Houdré, and M. Ilegems, "High Electron-Density and Mobility InGaAs InAlAs Modulation Doped Structures Grown on InP," *20th European Solid State Device Conference (ESSDERC 90)*, Nottingham, United Kingdom, 1990, W. Eccleston, and P. J. Rosser, eds. (Adam Hilger, Bristol), pp. 109-112 (1990).

1989

28. T. A. Gant, M. Delaney, M. V. Klein, R. Houdré, and H. Morkoc, "Erratum: Resonant Raman studies of confined LO modes and interfaces modes in a small period GaAs-AlAs superlattice," *Phys. Rev. B* **39**, 10429 (1989).

27. T. A. Gant, M. Delaney, M. V. Klein, R. Houdré, and H. Morkoc, "Resonant Raman Studies of Confined LO Modes and Interface Modes in a Small-Period GaAs/AlAs Superlattice," *Phys. Rev. B* **39**, 1696-1702 (1989).

26. U. K. Reddy, G. Ji, T. Henderson, D. Huang, R. Houdré, H. Morkoc, and C. W. Litton, "Interband-Transitions in In_xGa_{1-x}As/GaAs Strained Layer Superlattices," *J. Vac. Sci. Technol. B* **7**, 1106-1110 (1989).

25. H. J. Drouhin, C. Hermann, R. Houdré, and G. Lampel, "Emission dans le vide d'électrons photoexcités dans des puits quantiques et des superréseaux semi-conducteurs," *Image de la Physique (Suppl. au courrier du CNRS)* **74**, 62-66 (1989).
24. F. Ciccacci, H. J. Drouhin, C. Hermann, R. Houdré, and G. Lampel, "Spin-Polarized Photoemission from AlGaAs GaAs Heterojunction - a Convenient Highly Polarized Electron Source," *Appl. Phys. Lett.* **54**, 632-634 (1989).
23. A. Rudra, J. F. Carlin, R. Houdré, and M. Illegems, "Gas source switching in chemical beam epitaxy with pressure regulated gas flux," *5th European Workshop on Molecular Beam Epitaxy and Related Growth Techniques*, Grainau, West Germany, 1989.

1988

22. F. Ciccacci, H. J. Drouhin, C. Hermann, R. Houdré, G. Lampel, and F. Alexandre, "Energy and Spin Polarization Analysis of near Band-Gap Photoemission in AlGaAs/GaAs Heterostructures," *Solid-State Electron.* **31**, 489-492 (1988), *5th Conference on Hot Carriers in Semiconductors*, Boston, USA, 1987.
21. D. Huang, H. Y. Chu, Y. C. Chang, R. Houdré, and H. Morkoc, "Excitonic Absorption in Modulation-Doped GaAs/Al_xGa_{1-x}As Quantum Wells," *Phys. Rev. B* **38**, 1246-1250 (1988).
20. F. Ciccacci, H. J. Drouhin, C. Hermann, R. Houdré, G. Lampel, and F. Alexandre, "Energy and Spin Polarization Analysis of near Band-Gap Photoemission in AlGaAs/GaAs Heterostructures," *Phys. Scr.* **38**, 458-461 (1988), *7th General Conference of Condensed Matter Division of the European Physical Society*, Pisa, Italy, 1987.
19. M. W. Peterson, J. A. Turner, C. A. Parsons, A. J. Nozik, D. J. Arent, C. Vanhoof, G. Borghs, R. Houdré, and H. Morkoc, "Miniband Dispersion in GaAs/Al_xGa_{1-x}As Superlattices with Wide Wells and Very Thin Barriers," *Appl. Phys. Lett.* **53**, 2666-2668 (1988).

1987

18. U. K. Reddy, R. Houdré, G. Munns, G. Ji, H. Morkoc, M. Longerbone, L. Davis, B. P. Gu, and N. Otsuka, "Investigation of GaAs (Al,Ga)as Multiple Quantum-Wells Grown on Ge and Si Substrates by Molecular-Beam Epitaxy," *J. Appl. Phys.* **62**, 4858-4862 (1987).
17. G. Ji, D. Huang, U. K. Reddy, T. S. Henderson, R. Houdré, and H. Morkoc, "Optical Investigation of Highly Strained InGaAs-GaAs Multiple Quantum-Wells," *J. Appl. Phys.* **62**, 3366-3373 (1987).
16. T. Won, G. Munns, R. Houdré, and H. Morkoc, "Interface Charge Polarity of a Polar on Nonpolar Semiconductor GaAs Si with Ga and as Prelayers - Comment," *Appl. Phys. Lett.* **51**, 1756-1756 (1987).
15. C. Choi, N. Otsuka, G. Munns, R. Houdré, H. Morkoc, S. L. Zhang, D. Levi, and M. V. Klein, "Effect of Insitu and Exsitu Annealing on Dislocations in GaAs on Si Substrates," *Appl. Phys. Lett.* **50**, 992-994 (1987).
14. C. Hermann, H. J. Drouhin, R. Houdré, and G. Lampel, "Photoemission from Semiconductors under Negative Electron-Affinity," *Acta Phys. Pol. A* **71**, 403-407 (1987), *XVth International School of Physics on Semiconducting Compounds, Jaszowiecz, Poland*, 1986, invited communication.
13. U. K. Reddy, G. Ji, R. Houdré, H. Unlu, D. Huang, and H. Morkoc, "Study of GaAs/AlGaAs and InGaAs/GaAs multiple quantum wells grown on non-polar substrates by photorefectance," *SPIE Conference on Modern Optical Characterization Techniques for Semiconductors and Semiconductor Devices*, Bay Point, Florida, USA, 1987 (SPIE Proc.), **794**, pp. 116-120.

12. R. Houdré, G. Munns, H. Morkoç, C. Choi, N. Otsuka, S. L. Zhang, D. Levi, and M. V. Klein, "Dislocation reduction via annealing of GaAs grown on Si substrates," *SPIE Conference on Growth of Compound Semiconductors*, Bay Point, Florida, USA, 1987 (SPIE Proc.), **796**, pp. 27-31 (1987).
11. D. Huang, R. Houdré, Y. C. Chang, and H. Morkoç, "Excitonic absorption in modulation doped GaAs quantum wells," *March Meeting of the American Physical Society*, New York, USA, 1987, **32**, p. 850.
10. F. Ciccacci, H. J. Drouhin, C. Hermann, R. Houdré, and G. Lampel, "Near bandgap photoemission in $\text{Al}_{0.27}\text{Ga}_{0.63}\text{As}/\text{GaAs}$ quantum wells," *International Meeting on Excitons in Confined System*, Roma, Italy, 1987, R. D. Sole, A. D'Andrea, and A. Lapicciarella, eds. (Springer Verlag, Berlin, Germany), pp. 185-188.
9. G. Munns, R. Houdré, and H. Morkoç, "Molecular beam epitaxial growth of GaAs on Si," *1st International Electronics Conference of the Society for the Advancement of Material and Process Engineering*, Santa-Clara, California, USA, 1987 (Soc. Adv. Mater. & Process. Eng.), p. 750, invited communication.

1986

8. R. Houdré, C. Hermann, G. Lampel, and P. M. Frijlink, "Photoemission-Study of a Single GaAs/GaAs Quantum-Well," *Surf. Sci.* **168**, 538-545 (1986), *International Conference on the Formation of Semiconductor Interfaces*, Marseille, France, 1985, invited communication.
7. R. Houdré, C. Hermann, G. Lampel, and A. C. Gossard, "Photoemission and Photoluminescence from GaAs/GaAs Superlattices," *Phys. Scr.* **T13**, 241-244 (1986), *6th general conference of the Condensed Matter Division of the European Physical Society*, Stockholm, Sweden, 1986, invited communication.
6. R. Houdré, C. Hermann, G. Lampel, and A. C. Gossard, "Photoemission and Photoluminescence from GaAs/GaAs Superlattices," *J. Opt. Soc. Am. B* **3**, P108-P109 (1986), Part 2, *14th International Quantum Electronics Conference (CLEO/IQEC)*, San Francisco, USA, 1986.
5. F. Ciccacci, H. J. Drouhin, C. Hermann, R. Houdré, and G. Lampel, "Photoemission study of $\text{Al}_x\text{Ga}_{1-x}\text{As}/\text{GaAs}$ superlattices under negative electron affinity conditions," *Vuoto Sci. Tech.* **XVI**, 185-187 (1986), 11th Annual Meeting on Advances in Surface and Interface Physics, Modena, Italy, 1986.
4. T. Won, G. Munns, R. Houdré, and H. Morkoç, "Interface Charge Polarity of a Polar on Nonpolar Semiconductor GaAs-Si with Ga and As Prelayers," *Appl. Phys. Lett.* **49**, 1257-1259 (1986).
3. R. Houdré, H. J. Drouhin, C. Hermann, G. Lampel, and A. C. Gossard, "Near bandgap photoemission in GaAs ; application to GaAs/GaAlAs 2D structures," *18th International Conference on the Physics of Semiconductors*, Stockholm, Sweden, 1986, O. Engström, ed. (World Scientific, Chalmers, Göteborg), pp. 541-548, invited communication.

1985

2. R. Houdré, "Photoémission de puits quantiques et de superréseaux GaAs/GaAlAs en état d'affinité négative," (Paris-Sud, Orsay, 1985).
1. R. Houdré, C. Hermann, G. Lampel, P. M. Frijlink, and A. C. Gossard, "Photoemission from a Superlattice and a Single Quantum Well," *Phys. Rev. Lett.* **55**, 734-737 (1985).