

Fabrice P. LAUSSY



Curriculum Vitæ as of June 2013

First name: Fabrice (*second name: Pierre*)
Family name: Laussy
Nationality: French
Born: September 30, 1977 in Clermont-Ferrand (France)
Marital status: Married, no children

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Research Career

* Ph. D. 2005 in Theoretical Physics, Université Blaise Pascal, Clermont-Ferrand, France

Thesis advisor: Prof. Alexey Kavokin (alexey@phys.soton.ac.uk)
Thesis title: "Quantum Dynamics of Microcavity Polaritons"
Mention: «*Très honorable avec félicitations du jury*» (highest French distinction)

* Post-Doctoral Researcher (July 2005) in the group of Prof. David Whittaker, University of Sheffield, UK.

* Post-Doctoral Researcher (January 2007) in the group of Prof. Carlos Tejedor Universidad Autónoma de Madrid, Spain.

* Post-Doctoral Researcher (July 2008) in the group of Prof. Alexey Kavokin University of Southampton, UK.

* Marie Curie IEF fellow (June 2010) leading the project SQOD in Prof. J.J. Finley's group at the Walter Schottky Institut (Technische Universität München, Munich).

* *Currently:* Principal Investigator under a *Ramón y Cajal* 5 years tenure track (Madrid, Spain.)
Principal Investigator of the Madrid branch of the PolaFlow project, funded by a ERC starting grant of the European Union.

Scientific Output

* Over 80 papers in peer reviewed journals.

* 7 papers in Phys. Rev. Lett, 1 in Nature, 1 in Nature Physics.

* *h* factor 18 (18 papers quoted at least 18 times), over 1400 citations (348 in 2012).

* Selected publications:

- [1] *Strong coupling of quantum dots in microcavities*,
F.P. Laussy, E. del Valle and C. Tejedor, Phys. Rev. Lett., **101**, 083601 (2008).
- [2] *Collective fluid dynamics of a polariton condensate in a semiconductor microcavity*,
A. Amo, D. Sanvitto, F. P. Laussy *et al.*, Nature, **457**, 291 (2009).
- [3] *Mollow triplet under incoherent pumping*,
E. del Valle and F.P. Laussy, Phys. Rev. Lett., **105**, 233601 (2010).
- [4] *Exciton-Polariton Mediated Superconductivity*,
F.P. Laussy, A. V. Kavokin and I.A. Shelykh, Phys. Rev. Lett. **104**, 106402 (2010).
- [5] *Theory of frequency-filtered and time-resolved n-photon correlations*,
E. del Valle, A. Gonzalez-Tudela, F. P. Laussy *et al.*, Phys. Rev. Lett., **109**, 183601 (2012).

* Participation to over 25 international conferences, giving 5 invited contributions.

Academic Output

* Books:

- [1] *Microcavities*,
A.V. Kavokin, J.J. Baumberg, G. Malpuech and F.P. Laussy, Oxford University Press
1st edition (hardback): 2008, ISBN 0199228949
2nd edition (paperback): 2011, ISBN 0199602271

* Chapters in books:

- [1] *Photoluminescence lineshapes of quantum dots in Microcavities*,
F.P. Laussy, E. del Valle, A. Laucht, M. Kaniber, A.G. Tudela, J. Finley and C. Tejedor
in "*Quantum optics with semiconductor nanostructures*", Woodhead Publishing (2012)
- [2] *Quantum dynamics of polariton condensates*,
F.P. Laussy,
in "*Exciton Polaritons in Microcavities*", New Frontiers, Springer Verlag (2012)

* Administration

- Student delegate in Scientific Council of Université Blaise Pascal (2002-2005).
- Founder of Ph. D. seminars "Florin Périer" of Université Blaise Pascal (2003-2005).
- Scientific secretary of international workshops "Colloque Franco-Russe" (2004 & 2005).
- Scientific secretary of PLMCN7 international conference, la Habana, Cuba (2007).
- Referee for Nature, Physical Review (Lett., A and B), New J. Phys., Opt. Express, etc.

Editing

- Proceedings of the 3rd International Conference on Physics of Light-Matter Coupling in Nanostructures (PLMCN3), A. Kavokin and F.P. Laussy, *Physica Status Solidi (c)*, vol 1, issue 6, (2004)
- Proceedings of the 7th International Conference on Physics of Light-Matter Coupling in Nanostructures (PLMCN7), F.P. Laussy and A. Kavokin, *Superlattices and Microstructures*, vol 43, issue 5-6 (2007).
- New Journal of Physics focus issue on *Cavity and Circuit Quantum Electrodynamics in Solids*, Y. Arakawa, J.J. Finley, R. Gross, F.P. Laussy, E. Solano and J. Vuckovic (2013).

Supervision

- Elena del valle (2007-2009, Ph. D., co-supervision)
- Michael Schrapp (2010-2012, Master, full supervision)
- Carlos Sánchez (2012 onward, Ph. D., co-supervision)
- Blanca Silva Fernández (2013 onward, Ph. D., full-supervision)
- Dmitry Visnevskii (2013 onward, Post-Doc, full-supervision)

Languages

<i>French:</i>	Native
<i>English:</i>	Expert (lived over 5 years in UK)
<i>Spanish (Castellano):</i>	Proficient (Spanish wife, lived 2 years in Madrid)
<i>German:</i>	Elementary

Interests

- Scientific
 - * Light-matter interaction in semiconductors (Microcavity Quantum Electrodynamics),
 - * Polaritons Bose-Einstein condensation, superfluidity and superconductivity,
 - * Quantum optics,
 - * Interpretation of Quantum Mechanics.
- Others
 - * Game theory, chess, Computer science,
 - * History of science, Typography, etc.