
Curriculum Vitae David Hagenmüller

Born in Paris, France, on March 10th 1984

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Citizenship: French

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Marital status: Single

Education

- **2006-2008**: M.S. in Condensed Matter Physics at Université Paris Sud (UPSUD), France. With honours.
- **2003-2006**: B.S. in Physics at Université Pierre et Marie Curie (UPMC), Paris, France. With honours.

Research achievements

- Over 500 citations (Source Google scholar)
- H-index 7
- Referee for the American Physical Society

Research career

- **2015-Present**: Post-doctoral fellow at *Institut de Science et d'Ingénierie Supramoléculaires* (ISIS), group of Guido Pupillo, Université de Strasbourg, France.
- **2013-2015**: Post-doctoral fellow in the Physics department at University of Toronto (UofT), group of Sajeev John, Toronto, Canada.
- **2009-2012**: Ph.D. in theoretical Physics (thesis advisor Cristiano Ciuti) at *Laboratoire Matériaux et Phénomènes Quantiques*, Université Paris Diderot, France. With highest honours, *summa cum laude*.
- **2009**: Young researcher fellow, group of Robert A. Taylor, *Clarendon Laboratory*, University of Oxford, United Kingdom.
- **2007**: Young researcher fellow, group of Drazen Zanchi, *Laboratoire de Physique Théorique des Hautes Énergies (LPTHE)*, UPMC, Paris, France.

Publications

- « Collective coupling inheritance of a single quantum emitter », S. Schütz, J. Schachenmayer, D. Hagenmüller, V. Sandoghdar, C. Genes, T. W. Ebbesen, and G. Pupillo, **to be submitted** (2019)

- « Enhancement of the electron-phonon scattering induced by intrinsic surface plasmon-phonon polaritons », D. Hagenmüller, J. Schachenmayer, C. Genet, T. W. Ebbesen, and G. Pupillo, **arXiv:1810.10190** (2018).
- « Cavity-assisted mesoscopic transport of fermions: Coherent and dissipative dynamics », D. Hagenmüller, J. Schachenmayer, S. Schütz, C. Genes, and G. Pupillo, **Phys. Rev. B** **97**, 205303 (2018)
- « Cavity-enhanced transport of charge », D. Hagenmüller, J. Schachenmayer, S. Schütz, C. Genes, and G. Pupillo, **Phys. Rev. Lett.** **119**, 223601 (2017)
- « All-optical dynamical Casimir effect in a 3D terahertz photonic bandgap », D. Hagenmüller, **Phys. Rev. B** **93**, 235309 (2016).
- « Ultrastrong light-matter coupling at terahertz frequencies with split-ring resonators and inter-Landau level transitions », G. Scalari, C. Maissen, D. Hagenmüller, S. De Liberato, C. Ciuti, C. Reichl, W. Wegscheider, D. Schuh, M. Beck and J. Faist, **J. Appl. Phys.** **113**, 136510 (2013)
- « Ultrastrong coupling of the cyclotron transition of a two-dimensional electron gas to a terahertz metamaterial », G. Scalari, C. Maissen, D. Turcinkova, D. Hagenmüller, S. De Liberato, C. Ciuti, D. Schuh, C. Reichl, W. Wegscheider, M. Beck and J. Faist, **Science** **335**, 1323-1326 (2012)
- « Cavity QED of the graphene cyclotron transition », D. Hagenmüller and C. Ciuti, **Phys. Rev. Lett.** **101**, 267403 (2012)
- « Ultrastrong coupling between a cavity resonator and the cyclotron transition of a 2D electron gas in the case of integer filling factor », D. Hagenmüller, S. De Liberato and C. Ciuti, **Phys. Rev. B.** **81**, 235303 (2010)
- « Tannin-assisted aggregation of natively unfolded proteins », D. Zanchi, T. Narayanan, D. Hagenmüller, A. Baron, S. Guyot, B. Cabane and S. Bouhallab, **EPL** **82** No 5, 58001 (2008)

Conferences and talks

- Workshop on « Quantum dynamics » , 24th October 2018, IPCMS, Strasbourg. Talk « Intrinsic surface plasmon-phonon polaritons :A non-perturbative quantum theory »
- Symposium on « Quantum simulation of molecular dynamics and transport » , 6th December 2017, IPCMS, Strasbourg, France. Talk « Cavity-assisted transport of fermions: Coherent and dissipative dynamics ».
- Conférence de la Société Française de Physique, 3rd - 7th July 2017, Orsay, France. Poster « Cavity-enhanced transport of charge ».
- International conference on Optics of excitons in confined systems, 11th -16th October 2015, Jerusalem International YMCA, Israel. Poster « All-optical dynamical Casimir effect in a 3d terahertz photonic band gap »
- APS March Meeting, 27th February-2nd March 2012, Boston Massachusetts, USA. Talk « Ultrastrong coupling cavity QED of the magnetic cyclotron transition in a 2D electron gas: massive versus Dirac fermions ».
- 11th International conference on intersubband Transitions in Quantum Wells, 11th-17th September 2011, Badesi, Italy. Talk « Ultrastrong coupling between a cavity

resonator and the cyclotron transition in 2D systems ».

- 5th International Conference on Spontaneous Coherence in Excitonic Systems, 7th-11th February 2011, EPFL, Lausanne, Switzerland. Talk « *Ultrastrong coupling between a cavity resonator and the cyclotron transition of a 2D electron gas* »
- 3rd Soleil Users' Meeting, January 17th & 18th, 2008, Ecole Polytechnique, Palaiseau, France. Poster « *Interaction of natively unfolded proteins with tannins* ».
- 7th Liquid Matter Conference, 27th June-1st July 2008, Lund, Sweden. Poster « *Interaction of beta-casein with tannins* ».

Teaching

- 2013-2014: Undergraduate classes at University of Toronto: « *Quantum Mechanics* ». ~16h
- 2010-2012: Undergraduate classes at Université Paris-Diderot: « *PACES UE3 Physics* » (*Classical mechanics, wave mechanics, Fluid dynamics*), and « *Office software and web tools* ». ~128h
- 2009: Undergraduate classes at Université d'Évry Val d'Essonne: « *Physics for Biological sciences* ». ~16h