

ITHURRIA LHUILLIER Sandrine
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CURRICULUM

EDUCATION

- 2007-2010: **PhD Student** in Physico-chemistry. University Pierre and Marie Curie (UPMC).
Defended the 25th of october 2010
- 2006-2007: **Master of Science** « Molecules and Inorganic Materials » University Pierre and Marie Curie. Awarded with honours
- 2004-2007: **Industrial Physics and Chemistry Higher Educational Institution** ESPCI One of the top ten science school in France www.espci.fr - **Master of Science** (Chemistry, Biology, and Physics).

RESEARCH AND TEACHING EXPERIENCE

- Since October 2007: PhD thesis in physico-chemistry in the **Laboratoire de Physiques et d'Etude des Matériaux (LPEM)** of the Ecole Supérieure de Physique et de Chimie Industrielle de la Ville de Paris (ESPCI). Advisor : B. DUBERTRET.
Synthesis and characterization of II-VI semiconductor quantum dots doped with Mn²⁺.
Synthesis and characterization of semiconductor nanoplatelets of CdSe, CdS and CdTe.
- 2008/2010: **Teaching assistant** on Scanning Electronic Microscopy (Master degree)
- February/June 2007: *Synthesis of II-VI semiconductors nanocrystals doped with manganese.*
Master degree internship in the LPEM. Advisor : B. DUBERTRET.
- August/December 2005: *Synthesis and characterization of new hydrophobic precursors for automotive glazing*
Third year ESPCI industrial research internship between **Saint-Gobain Recherche** and the laboratoire PMC at **École Polytechnique**. Advisors : A. HUIGNARD and K. LAHLIL

SKILLS

- Technical:
- Synthesis of inorganic nanoparticles in organic solvent
 - High resolution Transmission Electronic Microscopy
 - Emission and absorption spectroscopy
 - X Ray Diffraction
 - Scanning Electronic Microscopy: Secondary and backscattered electron imaging; EDX for elemental mapping
- French: Mother tongue
- English: Fluent
- Spanish: Basic
- Software: Microsoft Office, EndNote, Cristallographic software, Scientific Data Analysis Software
Driving license

PERSONAL INTERESTS

- Animation: Diploma for youth leaders and workers
Leading a team of 4 persons, budget management, supervision of 20 youngs
- 2003/2010: Private lessons on mathematics, physics and chemistry for high school students
- Making hats: Creating and making hats with sisal and buntal.
- Reading : Learning Braille.

PUBLICATIONS AND PATENTS

- December 2010: Atomic-scale thickness control in CdE (e=E=Se, S, Te) nanoplatelets
Submitted to *Nature Materials*
Ithurria, S., Mahler, B., Dubertret, B. and Efros, Al. L.
- November 2010 : Continuous transition from 3D to 1D confinement observed during the formation of CdSe nanoplatelets
Accepted in *JACS*
Ithurria, S., Bousquet G. and Dubertret, B.
- March 2009 : Radial pressure measurement in core/shell nanocrystals
Proc. SPIE 7189, 718908 (2009)
Ithurria, S., Guyot-Sionnest, P., Mahler, B., and Dubertret, B.
- November 2008 : Quasi 2D colloidal CdSe platelets with thicknesses controlled at the atomic level
Journal of the American Chemical Society, **2008**, 130 (49), pp 16504–16505
Ithurria, S. and Dubertret, B.
- December 2007 : Mn²⁺ as a Radial Pressure Gauge in Colloidal Core/Shell Nanocrystals
Physical Review Letters , **2007**, 99, 265501
Ithurria, S., Guyot-Sionnest, P., Mahler, B., and Dubertret, B.
- N° 02007135315 : Composé hydrophobe, couche et vitrage obtenus à partir de ce composé.
A.Huignard, K.Lahlil, S.Ithurria, T.Gacoin, J.P.Boilot
- N° 02008007011 : Composition for hydrophobic treatment and glazing
A.Huignard, K.Lahlil, S.Ithurria, T.Gacoin, J.P.Boilot
- Ask N°1055594: Process for manufacturing a colloidal material, colloidal material and its uses
B. Dubertret, S. Ithurria

CONFERENCES

- December 2009 : **MRS Fall Meeting 2009**, Boston, MA
Oral communication: “Atomically controlled nanoplatelets of CdSe”
- July 2009 : **GRC Clusters, Nanocrystals & Nanostructures**, South Hadley, MA
Poster 1: “Mn²⁺ as a Radial Pressure Gauge in Colloidal Core/Shell Nanocrystals”
Poster 2: “CdSe colloidal quantum-well with thicknesses tuned at the atomic level”
- May 2009 : **OPTDIAG**, Paris, France
Poster : “CdSe colloidal quantum-well with thicknesses tuned at the atomic level”
- January 2009 : **BIOS SPIE Photonic West 2009**, San Jose, CA
Oral communication: “Radial Pressure Measurement In Core/Shell Nanocrystals”
- August 2010 : **12th JMC (Days of Condensed Matter) 2010**, Troyes, FRANCE
Oral communication: “Colloidal II-VI semiconductors quantum wells”

REFERENCES

- Benoît DUBERTRET LPEM UPR005 ESPCI, 10 rue Vauquelin, 75231 Paris, France
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Phone: +33 1 40 79 45 92
- Philippe GUYOT-SIONNEST James Franck Institute, 929 E. 57th St., GCIS E 111, Chicago, IL 60637 USA
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Phone: (773)702-7461
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