

David Pinto

Post Doctoral Researcher
in Material Chemistry

✉ Department of Materials Science + Engineering
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Experience

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- 2017-?** | **Drexel Nanomaterials Group, Yury Gogotsi Group – Post-doctorate**
Department of Materials Science and Engineering
Drexel University, Philadelphia, PA, US
Principle Advisor: Prof. Yury Gogotsi (gogotsi@drexel.edu)
KAUST project
– Elaboration, characterization and development of 2D ordered MXene for energy storage and conversion
- 2016-2017** | **Laboratoire Chimie de la Matière Condensée de Paris (LCMCP) – Post-doctorate**
2 month
Université Pierre et Marie Curie, Paris, France
Supervisor: Prof. Christel Laberty-Robert (christel.laberty@upmc.fr)
Financed by the CEA
– Elaboration of *silica- and zirconium-based ceramic fibers by electrospinning process and sol-gel chemistry*
- 2013-2016** | **Laboratoire Chimie de la Matière Condensée de Paris (LCMCP) – Doctorate**
3 years
CNRS, Collège de France, Université Pierre et Marie Curie, Paris, France
Electronic Transfer Within a Microbial Fuel Cell: Better understanding of Experimental and Structural Parameters at the Interface between Electro-active Bacteria and carbon-based Electrode
Director: Prof. Christel Laberty-Robert (christel.laberty@upmc.fr)
Co-director: Dr. Thibaud Coradin (thibaud.coradin@upmc.fr)
Financed by the Direction Générale de l'Armement DGA-MRIS, French Ministry Of Defense
– Elaboration of biofuel cell based on immobilization or encapsulation of electro-active bacteria on carbon-based electrodes (electrochemistry, microbiology, sol-gel process and chemistry).
– Electronic transfer and biofilm formation study at the bacteria-material interface (electrochemistry, impedance, electronic microscopy)
– Elaboration of specifically designed electrodes for microbial fuel cells application (electrospinning, spray-coating, freeze-drying and sol-gel chemistry, ...)
- 2013** | **ONERA (the French aerospace Lab) – Internship**
6 months
Department of Materials and Metallic Structure, France
Supervisor: Dr. Mikaël Perrut (mikael.perrut@onera.fr)
– Experimental study of diffusion multiples for thermodynamic modelling of three-elements alloys
– Development of a systematic exploration methodology to construct ternary phase diagrams of three-element alloys with limited experimental exploration (one diffusion multiple experiment)
- 2012** | **Pole Materials and Processing Engineering (IMAP) – Internship**
3 months
Université Catholique de Louvain, Belgium
Supervisor: Prof. Pascal Jacques (pascal.jacques@uclouvain.be)
– *Structural analysis (SEM, EDX cartography) of a high thermoelectric potential material (Fe₂VAI), based on heat treatments of a multilayer obtained by co-lamination of Iron, Vanadium and Aluminum sheets.*
- 2011** | **AREVA NP (6 weeks) and SNECMA Evry (5 weeks), France – « Operator » Internship**
- 2010** | **Laboratoire Charles Friedel (CNRS / Chimie ParisTech), France – Internship**
3 months
Supervisor: Dr. Nathalie Durand (nathalie.durand@upmc.fr)
– Elaboration of an *immunological test to quantitatively dose pollutants by infrared analysis.*
– Optimization of an *ELISA-like test based on chemically modified antibodies with dendrimer polymers, NMR, UV-Vis and infrared probes.*

Scientific skills and references

Chemistry, electrochemistry, sol-gel process, electrospinning, electrospray, microbiology, freeze-drying

Characterization: electrochemistry, impedance spectroscopy, electronic (SEM, EDX cartography) and optical microscopy, epifluorescence, infrared and UV-Vis spectroscopy, ...

References: C Laberty-Robert (christel.laberty@upmc.fr), T Coradin (thibaud.coradin@upmc.fr), M Perrut (mikael.perrut@onera.fr)

Education

- 2013-2016** | **PhD in Chemistry and Material Sciences**
Université Pierre et Marie Curie (Paris VI), Paris, France
Website → <http://www.upmc.fr>
- 2010-2013** | **Master's Degree in Engineering – Material Sciences**
Engineer School Polytech Paris-UPMC, Université Pierre et Marie Curie (Paris VI), Paris, France
Website → <https://www.polytech.upmc.fr/formation/materiaux>
- 2008-2010** | **DUT in Physical Measurements** (two-year university degree in technology, equivalent to BTEC Higher National Diploma)
IUT Paris Diderot, Université Paris Diderot (Paris VII), Paris, France
Website → <http://www.iut.univ-paris-diderot.fr>
- 2006-2008** | **Baccalauréat Scientifique, A-Level equivalent in Science, with Honors**
Lycée Antoine de Saint Exupéry, Créteil, France

Language and Computing Skills

Language:

- native French speaker
- English (880 TOEIC)
- Spanish (scholar level)

Tech skills:

- Microsoft Office, Origine 8, QtiPlot, Regressi, ThermoCalc/Dictra (notions), ImageJ
- Visualbasic VBA, HTML/CSS

Activities and Interest

- General interests on Sciences, Material sciences, Biotechnologies and Energy production
- Science popularization: « *Fête de la Science* », « *Village de la chimie* »
- Webdesigning, webworking

Scientific contributions – Communications and Publications

Participation in Workshops and Congress

- *Oral communication* at **NA-ISMET** (North America International Society for Microbial Electrochemistry and Technology), **2016**, Stanford, United States. Authors: D. Pinto, J-L. Sanchez, T. Coradin, C. Laberty-Robert.
- *Poster* at **Biofilms7, 2016**, Porto, Portugal. Authors: D. Pinto, T. Coradin, C. Laberty-Robert.
- *Poster* at **ELEN 2016** (Electrospinning for ENergy), **2016**, Montpellier, France (Jury Award). Authors: D. Pinto, J-L. Sanchez, I. Lucas, T. Coradin, C. Laberty-Robert.
- *Oral communication* at **IMPC, 2016**, Paris, France. Authors: D. Pinto, T. Coradin, C. Laberty-Robert.
- *Oral communication* and *Poster* at **Doctoral School 397 Days, 2015**, Paris, France (Jury Award). Authors: D. Pinto, T. Coradin, C. Laberty-Robert.
- *Oral communication* at **RNB** (Réseau National Biofilm), **2015**, Toulouse, France. Authors: D. Pinto, T. Coradin, C. Laberty-Robert.
- *Oral communication* at **Société Chimique de France, 2015**, Lille, France. Authors: D. Pinto, T. Coradin, C. Laberty-Robert.

Publications

- Estevez-Canales M, **Pinto D**, Coradin T, Laberty-Robert C, and Esteve-Núñez A., *Silica-immobilization of Geobacter sulfurreducens for constructing ready-to-use artificial bioelectrodes*, *Microb. Biotechnol.*, **2016**. Accepted.
- **Pinto D**, Coradin T and Laberty-Robert C, *Effect of the electrode polarization for bioanode colonization, biofilm formation and electron transfer into a Microbial Fuel Cell architecture*. Under publication.
- **Pinto D**, Coradin T and Laberty-Robert C, *Effect of Shewanella oneidensis bacterial state of growth on the bio-electrochemical behavior and electron transfer at a biofuel cell anode*. Under publication.

- **Pinto D**, Coradin T and Laberty-Robert C, *Electron transfer of Shewanella oneidensis encapsulated in a hybrid silica gel/graphite felt bioelectrode.*
- **Pinto D**, Sanchez J-L, Lucas I, Coradin T and Laberty-Robert C, *Construction of an electrospun carbon-based conductive material for electrochemical applications such as supercapacitors.*
- **Pinto D**, Sanchez J-L, Coradin T and Laberty-Robert C, *Development of electrospun carbon-based bio-electrode by immobilization of Shewanella oneidensis for Microbial Fuel Cell applications.*