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EDUCATION

Bergische Universität Wuppertal (University of Wuppertal)
Department of Macromolecular Chemistry, Wuppertal – Germany
Doctor of Natural Science, Dr. rer. nat., Chemistry, 10.2013 – 02.2017

Universidad Nacional Autónoma de México (Autonomous National University of Mexico)
Graduate Program of Chemistry, Mexico City – Mexico
Master in Sciences, M.Sc., Chemistry, 01.2011 – 01.2013

Universidad Central del Ecuador (Central University of Ecuador)
Faculty of Chemical Sciences, Quito – Ecuador
Bachelor of Science, B.Sc., Chemistry, 09.2004 – 04.2010

HONORS AND AWARDS

- Dr. rer. nat. *summa cum laude*, University of Wuppertal, Wuppertal – Germany, 02.2017
- Second Best Master Thesis in Electrochemistry at "New Processes and Materials Based on Electrochemical Concepts at the Microscopic Level: MicroEchem" Meeting, Queretaro – Mexico, 09.2013
- German Academic Exchange Service (DAAD) Scholarship for Doctoral Studies at the University of Wuppertal, 03.2013.
- M.Sc. Graduated with Honors (*summa cum laude*), Autonomous National University of Mexico, Graduate Program of Chemistry, M. Sc., Mexico City – Mexico, 01.2013
- Secretary of Foreign Affairs (Mexico) Scholarship for Master Studies at the Autonomous National University of Mexico, 01.2011.
- Best Undergraduate Student of the Generation 2009, Central University of Ecuador, Faculty of Chemical Sciences, Quito – Ecuador, 05.2010
- Student Representative to University Honor Council, Central University of Ecuador, Quito – Ecuador, 2009 – 2010
- Finalist in "BAYER - 4th Youth environmental meeting" with the research project "Production of bioethanol from waste paper and using as fuel", Quito – Ecuador, 11.2007

SCIENTIFIC PUBLICATIONS

1. **Palma-Cando, A.**; Frontana-Uribe, B.; Valera-Guerrero, V.: Relationship between Diffusion Coefficients and Doping Level for Electrogenerated Thin Films of PEDOT on ITO. *Synthetic Metals* (Submitted)
2. Chochos, C.; Drakopoulou, S.; Katsouras, A.; Squeo, B.; Sprau, C.; Colsmann, A.; Gregoriou, V. G.; **Palma-Cando, A.**; Allard, S.; Scherf, U.; Gasparini, N.; Ameri, T.; Brabec, C. J.; Avgeropoulos, A.: Beyond Donor-Acceptor (D-A) Approach: Structure-Optoelectronic Properties-Organic Photovoltaic Performance Correlation in New D-A1-D-A2 Low Band Gap Conjugated Polymers. *Macromol. Rapid Commun.* **2017**, DOI: 10.1002/marc.201600720
3. **Palma-Cando, A.**; Woitassek, D.; Brunklaus, G.; Scherf, U.: Luminescent Tetraphenylethene-Cored, Carbazole and Thiophene-Based Microporous Polymer Films for the Chemosensing of Nitroaromatic Analytes. *Mater. Chem. Front.* **2017**, DOI: 10.1039/C6QM00281A.
4. Gasparini, N.; García-Rodríguez, A.; Prosa, M.; Bayseç, Ş.; **Palma-Cando, A.**; Katsouras, A.; Avgeropoulos, A.; Pagona, G.; Gregoriou, V.; Chochos, C.; Allard, S.; Scherf, U.; Brabec, C.; Ameri, T.: Indacenodithienothiophene (IDTT)-Based Ternary Organic Solar Cells. *Front. Energy Res.* **2017**, DOI: 10.3389/fenrg.2016.00040.
5. **Palma-Cando, A.**; Preis, E.; Scherf, U.: Silicon- or Carbon-Cored Multifunctional Carbazolyl Monomers for the Electrochemical Generation of Microporous Polymer Films. *Macromolecules* **2016**, 49, 8041.
6. Räupeke, A.; **Palma-Cando, A.**; Shkura, E.; Teckhausen, P.; Polywka, A.; Görrn, P.; Scherf, U.; Riedl, T.: Highly Sensitive Gas-Phase Explosive Detection by Luminescent Microporous Polymer Networks. *Sci. Rep.* **2016**, 6, 29118.
7. **Palma-Cando, A.**; Scherf, U.: Electrochemically Generated Thin Films of Microporous Polymer Networks: Synthesis, Properties, and Applications. *Macromol. Chem. Phys.* **2016**, 217, 827.
8. **Palma-Cando, A.**; Brunklaus, G.; Scherf, U.: Thiophene-Based Microporous Polymer Networks via Chemical or Electrochemical Oxidative Coupling. *Macromolecules* **2015**, 48, 6816.
9. Squeo, B. M.; Gasparini, N.; Ameri, T.; **Palma-Cando, A.**; Allard, S.; Gregoriou, V. G.; Brabec, C. J.; Scherf, U.; Chochos, C. L.: Ultra Low Band Gap α,β -Unsubstituted BODIPY-Based Copolymer Synthesized by Palladium Catalyzed Cross-Coupling Polymerization for Near Infrared Organic Photovoltaics. *J. Mater. Chem. A* **2015**, 3, 16279.
10. **Palma-Cando, A.**; Scherf, U.: Electrogenerated Thin Films of Microporous Polymer Networks with Remarkably Increased Electrochemical Response to Nitroaromatic Analytes. *ACS Appl. Mater. Interfaces.* **2015**, 7, 11127
11. **Palma-Cando, A.**; Frontana-Uribe, B.; Maldonado, J.; Rivera-Hernández, M.: Control of Thickness of PEDOT Electrodeposits on Glass/ITO Electrodes from Organic Solutions and its Use as Anode in Organic Solar Cells. *Procedia Chem.* **2014**, 12, 92
12. Dong, W.; Fei, T.; **Palma-Cando, A.**; Scherf, U.: Aggregation Induced Emission and Amplified Explosive Detection of Tetraphenylethylene-Substituted Polycarbazoles. *Polym. Chem.* **2014**, 5, 4048.
13. **Palma-Cando, A.**; Rivera-Hernández, M.; Frontana-Uribe, B.: Electrodepositos de Poli-3,4-etilendioxitiofeno sobre Electrodo Transparentes de Oxido de Indio y Estaño. Control del Espesor y Morfología. *Química Central* **2013**, 3, 9.

RESEARCH EXPERIENCE

- **School of Chemical Sciences and Engineering**, Yachay Tech University, Urququi – Ecuador, 2017 –
 - a) Electrogeneration of Microporous Polymer Networks for Organic Devices.
 - b) Design and Building of a Low-Cost Potentiostat.
 - c) Design and preparation of Low-Cost OLEDs and OPVs.
- **Department of Macromolecular Chemistry**, University of Wuppertal, Wuppertal – Germany, 2013 – 2016
Advisor: Prof. Dr. Ullrich Scherf
Electrochemical Polymerization of Multifunctional Monomers to Microporous Polymer Networks for Applications in Sensing or Organic Electronic Devices
- **Graduate Program of Chemistry**, Autonomous National University of Mexico, Mexico City – Mexico; Joint Research Center on Sustainable Chemistry, Toluca – Mexico; Research Center on Optics, Leon – Mexico, 2011 – 2013
Advisor: Prof. Dr. Bernardo Frontana-Urbe
Electrodeposits of Poly-3,4-ethylenedioxythiophene (PEDOT) on transparent electrodes of indium tin oxide as anodes in bulk heterojunction organic photovoltaic devices
- **Faculty of Chemical Science**, Central University of Ecuador, Quito – Ecuador; Sewage and Potable Water Metropolitan Company of Quito, Quito – Ecuador, 2009 – 2010
Advisor: Prof. Edgar Pazmiño
Validation of Analytical Methods for Determination of Arsenic, Silver and Aluminium by Atomic Absorption Spectrometry and Visible Spectrophotometry

TEACHING AND SUPERVISORY EXPERIENCE

- **Professor Lecturer**, Fundamentals of Chemical Engineering (04.2017 –), Chemical Kinetics and Reactors (04.2017 –) and Materials Science II (01.2018 –) School of Chemical Sciences and Engineering, Yachay Tech University, Urququi – Ecuador, 04.2017 –
- **Supervisor and co-supervisor**, 5 Two-Weeks Projects and 2 B.Sc. Projects in Macromolecular Electrochemistry, Department of Macromolecular Chemistry, University of Wuppertal, Wuppertal – Germany, 2016
- **Teaching Assistant**, Inorganic Chemistry I and II, Faculty of Chemical Sciences, Central University of Ecuador, Quito – Ecuador, 01.2009 – 10.2010

MEMBERSHIPS

- International Society of Electrochemistry (ISE), Member since 2014

JOURNALS REFEREED

- ACS Applied Materials and Interfaces (3)
- Electrochimica Acta (3)
- Journal of the Mexican Chemical Society (1)

PRESENTATION AT SCIENTIFIC MEETINGS

Research Talks – External

- Conference Series of the Faculty of Civil Engineering and Environmental Control, EPN; Quito – Ecuador, 08.2017 (Talk)
- 67th Annual Meeting of the International Society of Electrochemistry, ISE – 2016; The Hague – Netherlands, 08.2016 (Poster)
- 6th Baltic Electrochemistry Conference; Helsinki – Finland, 06.2016 (Poster)
- GDCh-Wissenschaftsforum Chemie – 2015; Dresden – Germany, 09.2015 (Talk)
- International Workshop on the Electrochemistry of Electroactive Materials WEEM – 2015; Bad Herrenalb – Germany, 06.2015 (Poster)
- 65th Annual Meeting of the International Society of Electrochemistry, ISE – 2014; Lausanne – Switzerland, 09.2014 (Poster)
- 30° Congreso Latinoamericano de Química, CLAQ – 2012; Cancún – México, 10.2012 (Poster)
- XXVII Congreso de la Sociedad Mexicana de Electroquímica and 5th Meeting of the Mexican Section ECS; Toluca – México, 06.2012 (Poster)

Research Talks – Internal

- "Internal Symposium of the Institute of Chemistry 2012", Mexico City – Mexico, 12.2012 (Poster)
- "QuimiUNAM 2012", Mexico City – Mexico, 11.2012 (Poster)
- "Project Meeting CONACyT-SENER 153094(2011) – Design and Development of Efficient Organic Photovoltaics (OPVs) for Generation of Clean Energy", Mexico City – Mexico, 06.2012 (Talk)
- "Workshop about Organic Photovoltaic Cells (OPVS) - 3rd meeting of RED MATUEM", Mexico City–Mexico, 06.2011 (Talk)
- "1st Workshop of Chemical Science", Quito–Ecuador, 07.2007 (Talk)

ADDITIONAL TRAINING

Seminars and training courses

- "University Teaching", Quito – Ecuador, 01.2018
- "Horizon 2020 Infoday", Quito – Ecuador, 12.2017
- "III Meeting of Ecuadorian Students in Europe", Berlin – Germany, 10.2014
- "PIRE-ECCI Summer School on Catalysis in China", Dalian – China, 09.2012

- “XPS – Basic Concepts”, Toluca – Mexico, 07.2012
- “Pi conjugated systems for organic electronics”, Mexico City – Mexico, 02.2012
- “Functional polymers and organic conductive polymers”, Mexico City – Mexico, 01.2012
- “Mass Spectrometry - Basic concepts”, Mexico City – Mexico, 08.2011 – 12.2011
- “NMR - Basic concepts”, Mexico City – Mexico, 07.2011 – 12.2011
- “IR Spectrophotometry - Basic concepts”, Mexico City – Mexico, 02.2011 – 06.2011
- “Quality and ISO 9000”, Quito – Ecuador, 07.2010
- “Internal Auditors ISO 9001:2008”, Quito – Ecuador, 06.2010
- “Safety on Industrial and Chemical Laboratories”, Quito – Ecuador, 02.2007

Internships

- Sewage and Potable Water Metropolitan Company of Quito – Central Laboratory of Quality Control, Quito – Ecuador, 09.2009 – 12.2009
- Laboratory for Public Service – Environmental Chemistry Laboratory, Central University of Ecuador, Quito – Ecuador, 08.2008 – 09.2008
- National Institute for the Cultural Heritage – Chemistry Laboratory, Quito – Ecuador, 08.2007 – 09.2007

LANGUAGE SKILLS

- Spanish, First Language
- English, Advance Level
CEFR English Level C1, University of Wuppertal, Wuppertal–Germany, 02.2015
- German, Intermediate Level
CEFR German Level B1, Carl Duisberg Centren – Köln, Cologne–Germany, 09.2013