

Lara Tauk

Assistant Professor

O:S208

T:06.416100, Ext. 3199

E:ltauk@ndu.edu.lb

Biography

Dr. Lara Tauk received her PhD degree in organic Chemistry from the University of Strasbourg in France. Her seminal work has been rewarded by a publication as a first author in Nature Chemistry and an international patent. She received her Masters degree from the University of Paris VII Denis-Diderot. After her PhD, she spent 2 years on post-doctoral position at the European Membrane Institute in Montpellier where she was awarded one European Patent. Following that, she joined the Samsung research center in the Netherlands, and later the Amazon Company, where she researched novel displays based on the electro-wetting technology. She holds several patents in this area. After her professional experience, she joined Notre Dame University as an assistant professor. Her research interests include supramolecular architectures, engineered surfaces for various applications ranging from biomedical to electronic applications.

Peer-reviewed Journals

- L. Tauk, T., Thami, L. Ferez, A. Kocer, J.-M. Janot, P. Déjardin, "Thin phosphatidylcholine films as background surfaces with further possibilities of functionalization for biomedical applications" Colloids and Surfaces B: Biointerfaces 101, 189– 195, 2013.
- A. Kocer, L. Tauk, P. Déjardin, "Nanopore sensors: From hybrid to abiotic systems" Biosensors and Bioelectronics Journal, 38, (1), 1-10, 2012.
- L. Ferez, E. Akpalo, T., Thami, Edefia Akpalo, L. Tauk, J.-M. Janot, P. Déjardin, "Interface of Covalently Bonded Phospholipids with Phosphorylcholine Head: Characterization, Protein Nonadsorption, and further Functionalization", Langmuir, 27, 11536-11544, 2011.
- L. Tauk, A. Schröder, G. Decher, N. Giuseppone, "Dynamic Combinatorial Chemistry on Surfaces, Formation of Cy3-Cy5 Gradients Based on pH Responsive Self-Assembled Monolayers" Nature Chemistry, 1, 649-656, 2009.
- L. Tauk, et al. "Electrowetting element and manufacture method". US Patent 20160091711. Filed September 30, 2014, and issued March 17, 2016.
- L. Tauk, "Electrowetting element with a layer including silicon and fluorine". US Patent 9,304,312. Filed September 17, 2014, and issued March 31, 2016.
- P. Déjardin, T., Thami, L. Tauk, J.-M. Janot, L.Ferez, "Novel Neutral (bio)Material". EU Patent EP10306146.1 - 2111, 21 October 2010.
- N. Giuseppone, L. Tauk, G. Decher, A. Schröder, "Surfacial Gradients Formation using Dynamic Combinatorial Chemistry". Patent PCT/FR2010/051267, 23 June 20

Peer-reviewed Conference Proceedings

- Effect of fluoropolymer fluorination and molecular weight on Electrowetting display switching performance,

presentation, the 8th International Meeting on Electrowetting, Athens, Greece, June 2012.

- Background surfaces for biosensors, Poster presentation, 2nd International Symposium Frontiers in Polymer Science, Lyon, France, May 2011.
- Challenges in Organic and Bioorganic chemistry, Dynamic Combinatorial Chemistry on Surfaces: Formation of Highly Functional Gradients and Responsive Self-Assembled Monolayers (DynaSAMs), Poster, Tenth Tetrahedron Symposium, Paris, France, June 2009.
- Dynamic Combinatorial Chemistry onto Surfaces Toward the Formation of Functionalized SAMs Gradients, Oral Communication, Albe, France, ICS scientific days, June 2009.
- Dynamic Monolayers Toward the formation of functional gradients on surfaces, Poster presentation, IPCMS and ICS scientific days, Strasbourg, France, May 2009

Chapters in Books

L. Ferez, T., Thami, L. Tauk, E. Akpalo, V. Flauid, A. Kocer, J.-M. Janot, P. Déjardin, "Protein-Repellent Functionalizable Surfaces Based on Covalently Bonded Phospholipids with Phosphorylcholine Head", Chapter 31, pp 677