



Layla Badr, Ph.D.

Associate Professor

O: FNAS 0.46

T: 09 218950, Ext. 2737

E: lbadr@ndu.edu.lb

Biography

Dr. Layla Badr received her doctorate degree from Westfälische Wilhelms-Universität Münster, Germany under the curriculum of the International NRW Graduate School of Chemistry (GSC-MS) in 2010. She joined Notre Dame University - Louaize in October 2011 as an Assistant Professor of Chemistry, and is currently teaching chemistry courses. Her research interests are in transport, dynamics, and kinetics.

Peer-reviewed Journals

- "Electrical impedance characterization of (AgCl)_{0.05}(AgPO₃)_{0.95} and (AgBr)_{0.05}(AgPO₃)_{0.95} glassy systems over 5 K and 300 K temperature range" Layla Badr; Appl. Phys. A 130, 899 (2024).
- "Fractal dimension, lacunarity, and Shannon entropy of self-assembled macroscopic copper dendrites" Jafar Al Saadi, Layla Badr; Front. Phys. 12:1278781 (2024).
- "Propagation behavior of silver hydroxide precipitate bands" Layla Badr, Irving Epstein; Chemical Physics Letters 800 (2022) 139681.
- "Electroless, diffusion limited aggregation of lead dendrites" M. Abdel Baki, L. Badr; Chaos, Solitons and Fractals 143 (2021) 110586.
- "Characterization and conductivity of lithium, sodium, and silver metaphosphate glasses over wide frequency and temperature ranges" Badr, Layla; Phys. Chem. Glasses: Eur. J. Glass Sci. Technol. B, April 2018, 59 (2), 106-113.
- "Low temperature conductivity and ion dynamics in silver iodide – silver metaphosphate glasses" Layla Badr; Physical Chemistry Chemical Physics, 2017, 19, 21527 - 21531.
- Editor's choice "Size-controlled synthesis of Cu₂O nanoparticles via reaction-diffusion" Layla Badr, Irving R. Epstein; Chemical Physics Letters 669, 2017, 17-21.
- "Toward understanding the second universality – A journey inspired by Arthur Stanley Nowick" Klaus Funke, Radha D. Banhatti, Layla G. Badr, David M. Laughman, Himanshu Jain; J Electroceram (2015) 34:4-14.
- "Nearly constant loss effect in sodium borate and silver meta-phosphate glasses: New insights" R.D. Banhatti, D. Laughman, L. Badr, K. Funke; Solid State Ionics 192 (2011) 70-75.
- "Band, Target, and Onion Patterns in Co(OH)₂ Liesegang Systems" L. Badr, Z. Moussa, A. Hariri, R. Sultan; Physical Review E 83, 016109 (2011).
- "First and Second Universalities: Expeditions Towards and Beyond" K. Funke, R.D. Banhatti, D.M. Laughman, L.G. Badr, M. Mutke, A. Santić, W. Wrobel, E. Fellberg, C. Biermann; Z. Phys. Chem. 224 (2010) 1891-1950.
- "Morphology of a 2D Mg²⁺/NH₄OH Liesegang pattern in zero, positive and negative radial electric field" Layla Badr, Houssam El-Rassy, Samia El-Joubaily, Rabih Sultan; Chemical Physics Letters 492 (2010) 35-39.
- "Ring Morphology and pH Effects in 2D and 1D Co(OH)₂ Liesegang Systems" Layla Badr and Rabih Sultan; J. Phys. Chem. A, 2009, 113(24), 6581-6586.

- “Profiles of $\text{Co}(\text{NH}_3)_6^{2+}$ and $\text{Ni}(\text{NH}_3)_6^{2+}$ complexes in two-cation Liesegang systems” Layla Badr, Rabih Sultan; Chemical Physics Letters 453 (2008) 40-44.

Peer-reviewed Conference Proceedings

- K. Funke, J. Himanshu, L. Badr “Towards Understanding the Second Universality” 7th International Discussion Meeting on Relaxation in Complex Systems, Spain, 2013.
- L. Badr and K. Funke “The Nearly Constant Loss Effect in Metaphosphate Glasses” The European Materials Research Society, E-MRS 2012 Spring Meeting, France, 2012.
- L. Badr and K. Funke “Nearly Constant Loss Effect Studied in Metaphosphate Glasses” 6th International Discussion Meeting on Relaxation in Complex Systems, Italy, 2009.
- Layla Badr and R. Sultan, “Some Novel Aspects of Pattern Formation in Periodic Precipitation Systems” Dynamics Days Europe 2007 Conference, UK, 2007.

Chapters in Books

- Funke, K., Banhatti, R. D., Laughman, D. M., Badr, L.G., Mutke, M. Santic, A., Wrobel, W., Felberg, E. M. and Biermann, C.. “First and Second Universalities: Expeditions Towards and Beyond” Progress in Physical Chemistry Volume 4: Ionic Motion in Materials with Disordered Structures - From Elementary Steps to Macroscopic Transport, Munchen: Oldenbourg Wissenschaftsverlag, 2011, pp. 459-518.

Exhibitions, Competitions and Creative Work

- Fulbright Research Scholar Award, 2016, Brandeis University, Massachusetts, USA.