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İzmir Institute of Technology
Department of Chemical Engineering
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EXPERIENCE

- Assistant Professor, İzmir Institute of Technology (IZTECH), Department of Chemical Engineering, Urla, İzmir, TURKEY, 2018- ongoing.
- Postdoctoral Fellow, Georgia Institute of Technology, School of Chemistry and Biochemistry, Atlanta, GA, USA, 2015-2016.
- Research Assistant and Teaching Assistant, Georgia Institute of Technology, School of Chemical and Biomolecular Engineering, Atlanta, GA, USA, 2010-2015.
- Research Assistant and Teaching Assistant, Koç University, Department of Chemical and Biological Engineering, İstanbul, TURKEY, 2008-2010.
- Intern, PETKİM Petrochemical Inc., İzmir, TURKEY, 2006-2007.

EDUCATION

- PhD in Chemical and Biomolecular Engineering, Georgia Institute of Technology, Atlanta, GA, USA, 2015.
- PhD Minor in Electromagnetics and Microwave Engineering, Georgia Institute of Technology, Atlanta, GA, USA, 2015.
- MS in Chemical and Biological Engineering, Koç University, İstanbul, TURKEY, 2010.
- BS in Chemical Engineering, Boğaziçi University, İstanbul, TURKEY, 2008.

RESEARCH INTERESTS

electrochemistry, energy, materials, supercritical fluids, microelectronics, devices, mathematical modeling.

PROFESSIONAL AFFILIATIONS

- ECS, The Electrochemical Society
- AIChE, American Institute of Chemical Engineers
- IEEE, Institute of Electrical and Electronics Engineers

JOURNAL PUBLICATIONS

- İ. Şahin, E. Uzunlar, C. Erkey, "Investigation of the effect of gel properties on supercritical drying kinetics of ionotropic alginate gel particles", Journal of Supercritical Fluids, 2019, 152, 104571.

- İ. Şahin, E. Uzunlar, C. Erkey, “Investigation of kinetics of supercritical drying of alginate algogel particles”, *Journal of Supercritical Fluids*, 2019, 146, 78-88.
- A.K. Menon, E. Uzunlar, R.M. Wolfe, J.R. Reynolds, S. Marder, S.K. Yee, “Metallo-organic n-type Thermoelectrics: Emphasizing Advances in Nickel-Ethenetetra-thiolates”, *Journal of Applied Polymer Science*, 2016, 134, 3, 44402- 44402 (Selected as cover article).
- E. Uzunlar, J. Schwartz, O. Philips, P.A. Kohl, “Decomposable and Template Polymers: Fundamentals and Applications”, *Journal of Electronic Packaging*, 2016, 138, 020802-1 - 020802-15.
- E. Uzunlar, P.A. Kohl, “Size-compatible, Polymer-based Air-gap Formation Processes and Polymer Residue Analysis for Wafer-Level MEMS Packaging Applications”, *Journal of Electronic Packaging*, 2015, 137, 041001-1 - 041001-13.
- V. Kumar, R. Sharma, E. Uzunlar, L. Zheng, R. Bashirullah, P.A. Kohl, M.S. Bakir, A. Naeemi, “Airgap Interconnects: Modeling, Optimization and Benchmarking for Backplane, PCB and Interposer Applications”, *IEEE Transactions on Components, Packaging and Manufacturing Technology (CPMT)*, 2014, 4 (8), 1335-1346.
- E. Uzunlar, Z. Wilson, P.A. Kohl, “Electroless Copper Deposition Using Sn/Ag Catalyst on Epoxy Laminates”, *Journal of Electrochemical Society*, 2013, 160 (12), D3237-D3246.
- E. Uzunlar, B. Beykal, K. Ehrlich, D. Sanli, A. Jonas, B.E. Alaca, A. Kiraz, H. Urey, C. Erkey, “Frequency Response of Microcantilevers Immersed in Gaseous, Liquid, and Supercritical Carbon Dioxide”, *Journal of Supercritical Fluids*, 2013, 81, 254-264.
- E. Uzunlar, P.A. Kohl, “Thermal and Photocatalytic Stability Enhancement Mechanism of Poly(Propylene Carbonate) Due to Cu(I) Impurities”, *Polymer Degradation and Stability*, 2012, 97 (9), 1829-1837.
- N. Fritz, H.C. Koo, Z. Wilson, E. Uzunlar, Z. Wen, X. Yeow, S.A. Allen, P.A. Kohl, “Electroless Deposition of Copper on Organic and Inorganic Substrates using a Sn/Ag Catalyst”, *Journal of the Electrochemical Society*, 2012, 159 (6), D386-D392.

CONFERENCE PROCEEDINGS

- E. Uzunlar, A. Berkem, “Investigation of Electrochemical Synthesis of UiO-66 Thin Films on Zr foils”, *ELECTROCHEMISTRY 2019*, October 2019, İstanbul, TURKEY.
- İ. Şahin, E. Uzunlar, C. Erkey, “Kinetics of Supercritical Drying for Production of Aerogel Particles: Effects of Process Parameters and Gel Properties”, *International Congress on Particle Technology (PARTEC 2019)*, 2019, Nürnberg, ALMANYA.
- A.K. Menon, E. Uzunlar, R.M. Wolfe, C. Buckley, J.R. Reynolds, S. Marder, S.K. Yee, “Optimizing the Thermoelectric Properties of n-type Metallo-organic Polymers”, *Materials Research Society Meeting*, November 2016, Boston, MA, USA.
- E. Uzunlar, A. Daruwalla, Z. Zhu, R. Tabrizian, F. Ayazi, P.A. Kohl, “Polymer-based Air-gap MEMS Packaging Compatible with Epoxy-overmolding on Lead-frame Substrates”, *2014 AIChE Meeting*, November 2014, Atlanta, GA, USA.
- E. Uzunlar, O. Philips, Z. Zhu, P.A. Kohl, “Low-cost MEMS Packaging using Sacrificial Polymer-based in-situ Airgap Creation”, *226th Electrochemical Society (ECS) Meeting*, October 2014, Cancun, MEXICO.
- E. Uzunlar, P.A. Kohl, “Low-cost MEMS Packaging using Polymer-based Air-gaps”, *225th Electrochemical Society (ECS) Meeting*, May 2014, Orlando, FL, USA (accessible on *ECS Transactions*, 61 (3), 237-242).
- E. Uzunlar, Z. Wilson, P.A. Kohl, “Adherent Electroless Copper Deposition Using Inexpensive Sn/Ag Catalyst on Non-roughened Epoxy Laminate Substrates”, *224th Electrochemical Society (ECS) Meeting*, October 2013, San Francisco, CA, USA.

- E. Uzunlar, R. Sharma, R. Saha, V. Kumar, R. Bashirullah, A. Naeemi, P.A. Kohl, “Design and Fabrication of Ultra Low-loss, High-performance 3D Chip-chip Air-clad Interconnect Pathway”, 63rd IEEE Electronic Components and Technology Conference, May 2013, Las Vegas, NV, USA.
- R. Sharma, E. Uzunlar, V. Kumar, R. Saha, X. Yeow, R. Bashirullah, A. Naeemi, P.A. Kohl, “Design and Fabrication of Low-loss Horizontal and Vertical Interconnect links using Air-Clad Transmission Lines and Through Silicon Vias”, 62nd IEEE Electronic Components and Technology Conference, May 2012, San Diego, CA, USA.
- E. Uzunlar, M.S. Kılıç, B.E. Alaca, H. Ürey, C. Erkey, “Frequency Response of Microcantilevers in Supercritical CO₂”, 12th European Meeting on Supercritical Fluids, May 2010, Graz, AUSTRIA.

TEACHING ACTIVITIES (ALL AT IZTECH)

- CHE 595: Fundamentals of Electrochemical Engineering (Graduate-level elective course)
- CHE 411: Chemical Engineering Laboratory 3 (Graduation Projects, Undergraduate core course)
- CHE 330: Mathematical Modeling in Engineering (Undergraduate core course)
- CHE 302: Chemical Kinetics and Reactor Design (Undergraduate core course)
- CHE 210: Numerical Methods in Engineering (Undergraduate core course)
- CHE 102: Computer Tools in Engineering (Undergraduate core course)

THESIS ADVISORSHIP

- Advisor to 2 Master of Science theses in Department of Chemical Engineering.
- Co-advisor to a Master of Science thesis in Department of Energy Systems Engineering.

BOARD MEMBERSHIPS

- Reviewer Board Member of scientific journal, Micromachines, September 2019-ongoing.
- Technical Board Member of conference, Conference on Innovations in Intelligent Systems and Applications (ASYU 2019), IEEE, Yaşar University, Yıldız Technical University, 31 October-2 November, 2019, İzmir, TURKEY.

JOURNAL REVIEWERSHIP

- Micromachines
- Polymers
- Materials
- Applied Sciences
- Metals
- Coatings
- Inventions
- Journal of Applied Polymer Science
- IEEE Microwave and Wireless Component Letters

ACADEMIC SERVICE

- Deputy Chair, Department of Chemical Engineering, İzmir Institute of Technology, 2018-ongoing.
- Academic advisor to IAESTE (International Association for the Exchange of Students for Technical Experience) chapter at IZTECH, 2018-ongoing.
- Members of the following commissions in Department of Chemical Engineering, IZTECH: Quantification and Evaluation Commission, Quality Commission, Web Services Commission. 2018-ongoing.