

Merve KARABIYIK, Ph.D.

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Education

- Ph.D.* Chemical Engineering, İzmir Institute of Technology, İzmir, Turkey 2016-2023
Thesis: Chemical Vapor Deposited Reusable Fluorescent Thin Film Sensor Nanoprobes for The Detection of Heavy Metal Ions
Advisor: Prof. Dr. Özgenç EBİL
- M.Sc.* Chemical Engineering, İzmir Institute of Technology, İzmir, Turkey 2014-2016
Thesis: Development of Protective Nano-Coatings for Electro-Optical Systems
Advisor: Prof. Dr. Özgenç EBİL
- B.S.* Chemical Engineering, İzmir Institute of Technology, İzmir, Turkey 2009-2014
Thesis: Protein Stabilized Oil/Water Emulsions
Advisor: Prof. Dr. Mehmet POLAT

Academic Experience

- Researcher* Energy Storage, Thin-Film Devices and Nanofabrication Laboratory z05, Chemical Engineering January 2024-
İzmir Institute of Technology, İzmir, Turkey
- Research Assistant* Chemical Engineering, İzmir Institute of Technology, İzmir, Turkey January 2016-

Honours and Awards

- 2 The Scientific and Technological Research Council of Turkey (TÜBİTAK) 2224-International Scientific Meetings Fellowship Programme 2019/4.
- 1 The Honour Student of the Chemical Engineering Department, İzmir Institute of Technology, İzmir, Turkey, 2014.

Project Experience

Scholarship Position

- 5 Encapsulation of QD-Based Sensor Structures with iCVD Polymer Thin Films, Scientific Research Project, Project No 2022IYTE-1-0091, İzmir Institute of Technology, İzmir, Turkey, 2023.
- 4 Functionalization of Polymeric Films with Nanoparticles for Sensor Applications, TÜBİTAK 1002 Project, Project No 119M113, İzmir Institute of Technology, İzmir, Turkey, 2020.
- 3 Functionalisation of Polymeric Films with Quantum Dots, Scientific Research Project, Project No 2019IYTE0191, İzmir Institute of Technology, İzmir, Turkey, 2019.
- 2 Development of Protective Nano Coatings for Electro-Optical Systems, TÜBİTAK 1001 Project, Project No 114M233, İzmir Institute of Technology, İzmir, Turkey, 2017.
- 1 Development of Polymeric Optical Filters, Scientific Research Project, Project No 2016IYTE29, İzmir Institute of Technology, İzmir, Turkey, 2016.

Publications

- 5 **Karabiyik, M.**, and Ebil, Ö. (2024). Reusable polymer-based fluorescent sensor nanoprobe for selective detection of Cd²⁺ ions in real water sources. *Journal of Material Chemistry C*, 12, 13073-13087.
- 4 **Karabiyik, M.**, Cihanoglu, G., and Ebil, Ö. (2023). CVD Deposited Epoxy Copolymers as Protective Coatings for Optical Surfaces. *Polymers*, 15(3), 652.
- 3 Cihanoglu, G. **Karabiyik, M.**, Odabasi, İ., and Balkose D. (2022). Composition, Morphology, Optical, Thermal and Mechanical Properties of Yogurt Containers. *European Journal of Technique (EJT)*, 12(2), 145-151.
- 2 **Karabiyik, M.**, and Ebil, Ö. (2022). Polymer-bonded CdTe quantum dot-nitroxide radical nanoprobes for fluorescent sensors. *Journal of Materials Science*, 57, 16258-16279.
- 1 **Özpirin, M.**, and Ebil, Ö. (2018). Transparent block copolymer thin films for protection of optical elements via chemical vapor deposition. *Thin Solid Films*, 660, 391-398.

International Conference Proceedings

- 5 **Karabiyik M.**, and Ebil O. Selective On-Off-On Polymer Bonded Quantum dot-Nitroxide Radical Fluorescent Sensor to Detect Cd²⁺ Ion in Aqueous Media, Materials Research Society (MRS), December 5-7, 2023, Boston, Massachusetts, virtual (Oral Presentation).
- 4 **Karabiyik M.**, Cihanoglu G., Ebil O., "Protective Epoxy Copolymers via Chemical Vapor Deposition for Optical Surfaces", 17th International Nanoscience & Nanotechnology Conference, August 27-29, 2023, Izmir, Turkey (Poster presentation)
- 3 **Ozpirin M.**, and Ebil O. Functionalization of CVD Compatible Polymer Films for Sensing Applications, European Materials Research Society (E-MRS), September 16-19, Warsaw, Poland (Oral Presentation)
- 2 **Ozpirin M.**, and Ebil O. Protective Nano-Coatings for Electro-Optical Systems, Nanoscience & Nanotechnology Conference (NanoTr-13), October 22-25, Antalya, Turkey (Oral Presentation).
- 1 **Ozpirin M.**, and Ebil O. Development of Protective Nano-Coatings for Electro-Optical Systems, Science and Applications of Thin Films, Conference & Exhibition (SATF), September 19-23, 2016, Çeşme, İzmir, Turkey (Oral Presentation).

National Conference Proceedings

- 2 **Karabiyik M.**, Cihanoglu G., Ebil O. CVD Deposited Protective Epoxy Copolymer Effects on Transmittance Behaviour of Optical Surfaces, 15th National Chemical Engineering Conference, September 4-7, 2023, Çanakkale, Turkey. (Poster Presentation)
- 1 Olcay A.N., **Ozpirin M.**, Kirkose S. Stabilization of Oil-Water Emulsion System with BSA Protein, 11th National Chemical Engineering Conference, September 2-5, Eskişehir, Turkey (Oral Presentation).