

First Names, Surname: Mustafa Muammer, DEMİR
Date of Birth: 30.12.1975



Academic

- **June, 2019** - Izmir Institute of Technology
Engineering Faculty (**Dean**)
- **June, 2014**- Izmir Institute of Technology
Faculty of Engineering, Department of Material Science and Engineering -
Prof.Dr. (Chairman)
- **February, 2013**- Izmir Institute of Technology
Faculty of Engineering, Department of Material Science and Engineering -
Assoc.Prof.Dr. (FOUNDER Chairman)
- **December, 2008**- Izmir Institute of Technology
Faculty of Science, Department of Chemistry - **Assoc.Prof.Dr.**
- **April, 2007**- Izmir Institute of Technology
Faculty of Science, Department of Chemistry - **Assist.Prof.Dr.**
- **February, 2007**- Max-Planck Institute for Polymer Research, GERMANY, **Post. Doc.**
- **May, 2004**- Sabancı University, TURKEY
Material Science and Engineering – **Ph.D.**
- **June, 2001**- Sabancı University, TURKEY
Material Science and Engineering – **MSc.**
- **June, 1999**- Bogaziçi University, TURKEY
Chemistry – **BSc.**
- Bursa Science High School

Awards

- Annual Academic Performance Award of Izmir Institute of Technology (2012, 2014, 2016, 2017, 2018, 2019, 2020, 2021, 2022).
- 3rd Istanbul International Inventions Fair 2018 for a Patent (TR 2017/07159) - **Gold Medal**.
- Fevzi Akkaya Foundation "**Outstanding Young Scientist**" Award (FABED) 2014.
- **Scientist Award**, 2013 from International Association of Advanced Materials.
- Turkish Academy of Science "**Outstanding Young Investigator**" Award (TÜBA GEBİP) 2013.
- The patent encoded with TR 2009/07107 was **awarded as the gold patent** of 2009 by TPE.
- **Golden Hammer Award** of Turkish Geological Society for a Research article 2021 (Geothermics 96, 102227)

Grants

- "**Reflect European Union Project**" by EU encoded with 101058163 (2021) "CRM-geothermal: Raw materials from geothermal fluids: occurrence, enrichment, extraction" - **Ongoing**
- "**Reflect European Union Project**" by EU encoded with 850626 (2020) "Redefining Geothermal Fluid Properties at Extreme Conditions to Optimize Future Geothermal Energy Extraction" - **Ongoing**
- "**Research Project Grant**" by TÜBİTAK encoded with 117Z331 (2017). "Pressure Sensors based on Inorganic Colloidal Sytems" - **Completed**
- "**Research Project Grant**" by TÜBİTAK encoded with 114Z940 (2015). "Synthesizing of artificial Metal (Fe,Mg) silicate deposits under high pressure and temperature conditions and development of polymeric inhibitor for metal silicate scaling" - **Completed**
- "**Research Project Grant**" by TÜBİTAK encoded with 114Z292 (2014). "Fabrication of triboluminescent polymeric films and fibers and their applications" - **Completed**
- "**Integrated Research Centers**" by Development Ministry of Turkey (2012), "The development of Infrastructure of IYTE" - **Completed**
- "**Research Project Grant**" by TÜBİTAK encoded with 109T905 (2009). "Fabrication of transparent composites with high refractive index containing invisible nanoparticles" -**Completed**
- "**Career Development Program**" by The Scientific and Technical Research Council of Turkey (TÜBİTAK) encoded with 107T795 (2008). "Fabrication and optical characterization of uniaxially – oriented light emitting polymeric fibers via electrospinning"- **Completed**

Industrial Collaborations (R&D Projects)

- 2020-21 Testing performance of inhibitors, Company: Neu Chemie
- 2020-21 Scaling Mitigation for System Development, Company: Izmir Geothermal
- 2020-21 Fabrication of Solventless Polyurethane, Company: Kanat Coatings & Paints.
- 2011-20 Hydrogeological and hydrochemical analysis of scaling in geothermal reservoirs, Company: Tuzla JES Geothermal Power Plant, Company: Enda.
- 2019, Greeneco Geothermal Power Plant, scaling problem.
- 2019, Carisma Geothermal Power Plant, scaling problem.
- 2017, A New Material Approach to vacuum tubed Sun shine Collectors, TÜBİTAK Project No: 2150428, Company: Hitit
- 2015, Remote Phosphor Application in Lightning Technology, TÜBİTAK Project No: 3150192 Company: Vestel
- 2014-15, Semiology translated into Voice, TÜBİTAK Project No: 7140252, Company: Turtela
- 2001-03, Fiber Optical Humidity Sensor, Company: Arçelik.

Patents:

- *M. M. Demir, M.A. Gülgün, Y.Z. Menceloğlu, 'Metal Coated Nano Fibers' WO 2005/021845 A1.
*M.M. Demir, M.A. Gülgün, Y.Z. Menceloğlu, 'Metal kaplı lifler' 200907107 (2009)
* T. Güner, U. Şentürk, M. M. Demir, Bir Fosfor Dönüşümlü Beyaz Led Paketi (Turkish Patent Institute, 2017/07159)
* M. M. Demir, A. Baba, 'Sistemden salınan sera gazlarının kabuk oluşumunu engellemeye amacıyla hat inhibitörü olarak kullanıldığı jeotermal santral sistemi' 2019 evaluation phase.

Publications (Total Citations >5000 by Jan 2023 via Google Scholar)

- 106.** Tokkan, M., Demir, M.M., Adem, U. 'Enhanced electrocaloric effect of P(VDF-TrFE)-based nanocomposite with Ca and Sn co-doped BaTiO₃ particles' *Ceramics International*, 49(2), 2904-2910, (2023).
- 105.** Tonkul, S., Baba, A., Demir, M.M., Regenspurg, S. 'Investigation of Stibnite (Antimony) Scale in Germencik Geothermal Site, Büyük Menderes Graben, Western Turkey' *EGU General Assembly 2022*, EGU22-9238, (2022)
- 104.** Yuce, H., LaFollette, D., Demir, M.M., Perini, C.A.R., Correa-Baena, J. 'Effects of Alkaline Earth Metal Additives on Methylammonium-free Lead Halide Perovskites Thin Films and Solar Cells' *Solar RRL*, 2100999, (2022)
- 103.** Yuce, H., Mandal, M., Yalcinkaya, Y., Andrienko, D., Demir, M.M. 'Improvement of Photophysical Properties of CsPbBr₃ and Mn²⁺:CsPb(Br,Cl)₃ Perovskite Nanocrystals by Sr²⁺ Doping for White Light-Emitting Diodes' *The Journal of Physical Chemistry C* 126, 11277-11284, (2022)
- 102.** Yuce, H., Perini, C.A.R., Hidalgo, J., Castro-Mendez, A.F., Evans, C. Betancur, F.B., Vagot, J.N., An, Y., Bairley, K., Demir, M.M., Correa-Baena, J. 'Understanding the impact of SrI₂ additive on the properties of Sn-based halide perovskites' *Optical Materials* 123, 111806, (2022)
- 101.** Baba, A., Sözbilir, H., Sayık, T., Arslan, S., Uzelli, T., Tonkul, S., Demir, M.M. 'Hydrogeology and hydrogeochemistry of the geothermal systems and its direct use application: Balçova-Narlıdere geothermal system, Izmir, Turkey' *Geothermics* 104, 102461 (2022).
- 100.** Karaburun, E., Sozen, Y., Çiftçi, C., Sahin, H., Baba, A., Akbey, Ü., Yeşilnacar, M.İ., Erdim, E., Regenspurg, S., Demir, M.M. 'Experimental modeling of antimony sulfides-rich geothermal deposits and their solubility in the presence of polymeric antiscalants' *Geothermics* 104, 102452 (2022).
- 99.** Erdem, Ç., Isik, T., Horzum, N., Hazer, B., Demir, M.M. 'Electrospinning of Fatty Acid-Based and Metal Incorporated Polymers for the Fabrication of Eco-friendly Fibers' *Macromolecular Chemistry and Physics*, 2100438, (2022).
- 98.** Gökbüyük, B., Inanç, A., Topcu, G., Ozcelik, S., Demir, M.M., Inci, M.N. 'Hybrid photonic-plasmonic mode-coupling induced enhancement of the spontaneous emission rate of CdS/CdSe quantum emitters' *Physica E: Low-dimensional Systems and Nanostructures*, 115017, (2022)
- 97.** Gökbüyük, B., Topcu, G., Demir, M.M., Inci, M.N. 'Plasmon-induced spectral tunability of Perovskite nanowires' *Optical Materials* 122, 111702, (2021)
- 96.** Tonkul, S., Baba, A., Demir, M.M., Regenspurg, S. 'Characterization of Sb scaling and fluids in saline geothermal power plants: A case study for Germencik Region (Büyük Menderes Graben, Turkey)' *Geothermics* 96, 102227, (2021).
- 95.** Gökbüyük, B., Inanç, A., Topcu, G., Ozcelik, S., Demir, M.M., Inci, M.N. 'Enhanced light-matter interaction in a hybrid photonic–plasmonic cavity' *Applied Physics A* 127 (12), 1-13, (2021)
- 94.** Aouadja, F., Bouzerara, F., Aouadja, F., Guvenc, C.M., Demir, M.M. 'Fabrication and properties of novel porous ceramic membrane supports from the (Sig) diatomite and alumina mixtures' *Boletín de la Sociedad Española de Cerámica y Vidrio*, (2021).
- 93.** Arica, T.A., Isik, T., Guner, T., Horzum, N., Demir, M.M. 'Advances in Electrospun Fiber-Based Flexible Nanogenerators for Wearable Applications' *Macromolecular Materials and Engineering*, 2100143, (2021).
- 92.** Gören, A.Y., Topcu, G., Demir, M.M., Baba, A. 'Effect of high salinity and temperature on water–volcanic rock interaction' *Environmental Earth Sciences* 80 (3), 1-13, (2021).
- 91.** Arica, T.A., Guzelgulgen, M., Yildiz, A.A., Demir, M.M. 'Electrospun GelMA fibers and p (HEMA) matrix composite for corneal tissue engineering', *Materials Science and Engineering: C*, 2021 120, 111720, (2021).
- 90.** Özsoylu, D., Isik, T., Demir, M.M., Schöning, M.J., Wagner, T. 'Cryopreservation of a cell-based biosensor chip modified with elastic polymer fibers enabling ready-to-use on-site applications' *Biosensors and Bioelectronics* 177, 112983, (2021).
- 89.** Inci, E., Topcu, G., Guner, T., Demirkurt, M., Demir, M. M. 'Recent developments of colorimetric mechanical sensors on polymer composites' *Journal of Materials Chemistry C*, 8(35), 12036-12053, (2020).
- 88.** Çiftçi, C., Karaburun, E., Tonkul, S., Baba, A., Demir, M. M., Yeşilnacar, M. İ. 'Testing the performance of various polymeric antiscalants for mitigation of Sb-rich precipitates mimicking stibnite-based geothermal Deposits' *Geofluids*, 8867084, (2020).
- 87.** Lova, P., Olivieri, M., Surace, A., Topcu, G., Emirdag-Eanes, M., Demir, M. M. 'Polymeric Planar Microcavities Doped with a Europium Complex' *Crystals* 10 (4), 287, (2020).
- 86.** Arica, T. A., Topcu, G., Pala, A., Demir, M. M. 'Experimental apparatus for simultaneous measurement of triboelectricity and triboluminescence' *Measurement* 152, 107316, (2020).
- 85.** Inci, E., Topcu, G., Demir, M.M. 'Colloidal films of SiO₂ in elastomeric polyacrylates by photopolymerization: A strain sensor application' *Sensors and Actuators B: Chemical* 305, 127452, (2020).
- 84.** Yuce, H., Guner, T., Dartar, S., Kaya, B. U., Emrullahoglu, M., & Demir, M. M., ' BODIPY-based organic color conversion layers for WLEDs.' *Dyes and Pigments*, 173, (2020).
- 83.** Ozcan, M., Ozen, S., Topcu, G., Demir, M.M., Sahin, H. 'Color-Tunable All-Inorganic CsPbBr₃ Perovskites Nanoplatelet Films for Photovoltaic Devices', *ACS Appl. Nano Mater.* 8, 5149-5155, (2019).
- 82.** T. Guner, A. Kus, M. Ozcan, A. Genc, H. Sahin, M. M. Demir 'Green fabrication of lanthanide-doped hydroxide-based phosphors: Y(OH)3: Eu³⁺ nanoparticles for white light generation', *Beilstein Journal of Nanotechnology*, 1, 1200-1210, (2019).
- 81.** T. Guner, H. Yuce, D. Tasçıoğlu, E. Simsek, U. Savaci, 'Optimization and performance of nitrogen-doped carbon dots as a color conversion layer for white-LED applications', *Beilstein Journal of Nanotechnology*, 1, 2004-2013, (2019).
- 80.** B. Gökbüyük, A. Inanc, G. Topcu, SS. Unluturk, S. Ozcelik, 'Enhanced Spontaneous Emission Rate in a Low- Q Hybrid Photonic-Plasmonic Nanoresonator, *The Journal of Physical Chemistry C*, 123, 19862-19870, (2019).
- 79.** Topcu, G., Demir, M.M., 'Effect of chain topology on plasmonic properties of pressure sensor films based on poly(acrylamide) and Au nanoparticles', *Sensors and Actuators, A: Physical*, 295, 237-243, (2019).
- 78.** Topcu, G., Guner, T., Inci, E., & Demir, M. M. (2019). Colorimetric and Plasmonic Pressure Sensors based on Polyacrylamide/Au Nanoparticles. *Sensors and Actuators A: Physical*.295, ,503-511, (2019).
- 77.** Guvenc, C.M., Yalcinkaya, Y., Ozen, S., Sahin, H., Demir, M.M., 'Gd³⁺-Doped α-CsPbI₃ Nanocrystals with Better Phase

- Stability and Optical Properties', *Journal of Physical Chemistry C*, (2019).
- 76.** A. Baba, F. Saroğlu, I. Akkuş, N. Özel, M. İ. Yesilnacar, M. T. Nalbantçılar, M. M. Demir, G. Gökcen, Ş. Arslan, N. Dursun, T. Uzelli, H. Yazdani 'Geological and hydrogeochemical properties of geothermal systems in the southeastern region of Turkey' *Geothermics*, 78, 255-271 (2019).
- 75.** H. Yuce, T. Guner, S. Balci, M. M. Demir 'Phosphor-based white LED by various glassy particles: control over luminous efficiency' *Optics Letters* 44, 479-482 (2019).
- 74.** G. Topcu, G. A. Koç, A. Baba, M. M. Demir 'The injection of CO₂ to hypersaline geothermal brine: A case study for Tuzla region' *Geothermics* 80, 86-91 (2019).
- 73.** S. K. Shukla, C. S. Kushwaha, T. Guner, M. M. Demir 'Chemically modified optical fibers in advanced technology: An overview' *Optics and Laser Technology* 115, 404-432 (2019).
- 72.** T. Isik, M. M. Demir 'Tailored electrospun fibers from waste polystyrene for high oil adsorption' *Sustainable Materials and Technologies* 17, e00084 (2018).
- 71.** B. Satilmis, T. Isik, M. M. Demir, T. Uyar 'Amidoxime functionalized Polymers of Intrinsic Microporosity (PIM-1) electrospun ultrafine fibers for rapid removal of uranyl ions from water' *Applied Surface Science* 467-468, 648-657 (2019).
- 70.** G. Topcu, A. Çelik, A. Kandemir, A. Baba, H. Şahin, M. M. Demir 'Increasing Solubility of Metal Silicates by Mixed Polymeric Antiscalants' *Geothermics*, 77, 106-114 (2019).
- 69.** T. Guner, E. Aksoy, M. M. Demir, C. Varlıklı 'Perylene-embedded electrospun PS fibers for white light generation' *Dyes and Pigments*, 160, 501-508 (2019).
- 68.** O. Acar, S. Varis, T. Isik, S. Tirkeş, M. M. Demir 'Synthesis and characterization of novel high temperature structural adhesives based on nadic end capped MDA-BTDA-ODA polyimide' *Materials Research Express*, 5, 105305 (2018).
- 67.** M. U. Mutlu, O. Akın, M. M. Demir, Ü. H. Yıldız 'Fabrication of Polymer Nanofiber-Conducting Polymer Fabric and Noncontact Motion Sensing Platform' *Materials Science Forum* 915, 207-212 (2018)
- 66.** T. Isik, M. M. Demir 'Medical Waste Treatment via Waste Electrospinning' *Fibers and Polymers* 19 (4), 767-774 (2018)
- 65.** T. Güner, B. Akbali, M. Özcan, G. Topcu, M. M. Demir, H. Şahin 'Monitoring the Doping and Diffusion Characteristics of Mn Dopants in CesiumLead Halide Perovskites' *The Journal of Physical Chemistry C* 122 (21), 11543-11549 (2018)
- 64.** M. Demirkurt, Y. A. Olcer, M. M. Demir, A. E. Eroğlu 'Electrospun polystyrene fibers knitted around imprinted acrylate microspheres as sorbent for paraben derivatives' *Analytica Chimica Acta* 1014, 1-9 (2018)
- 63.** T. Güner, M. M. Demir 'A Review on Halide Perovskites as Color Conversion Layers in White Light Emitting Diode Applications' *Physica Status Solidi (a)* 1800120 (2018)
- 62.** A. Çelik, G. Topcu, T. Isik, A. Baba, N. Horzum, M. M. Demir 'Investigation of Lithium Sorption Efficiency Using SWCNT Functionalized Electrospun Fiber Mats from the Hypersaline Geothermal Brine' *Materials Science Forum* 915, 121-126 (2018).
- 61.** B. Akbali, G. Topcu, T. Güner, M. Özcan, M. M. Demir, H. Şahin 'CsPbBr₃ perovskites: Theoretical and experimental investigation on water-assisted transition from nanowire formation to degradation' *Physical Review Materials* 2 (3), 034601 (2018).
- 60.** G. Topcu, T. Güner, M. M. Demir 'Non-iridescent structural colors from uniform-sized SiO₂ colloids' *Photonics and Nanostructures-Fundamentals and Applications* 29, 22-29 (2018).
- 59.** T. Güner, G. Topcu, U. Savacı, A. Genç, S. Turan, E. Sarı, M. M. Demir 'Polarized Emission from CsPbBr₃ Nanowires Embedded-Electrospun PU fibers' *Nanotechnology* 29, 135202 (2018).
- 58.** A. İncel, M. M. Demir 'Triboluminescent composite microspheres consisting of alginate and EuD4TEA crystals' *Sensors and Actuators A: Physical* 269, 556-562 (2018)
- 57.** T. Güner, U. Şentürk, M. M. Demir 'Optical Enhancement of Phosphor-converted wLEDs using Glass Beads' *Optical Materials* 72, 769-774 (2017).
- 56.** G. Topcu, A. Çelik, A. Baba, M. M. Demir* 'Design of polymeric antiscalants based on functional vinyl monomers for (Fe, Mg) silicates' *ACS Energy & Fuels* 31, 8489-8496 (2017).
- 55.** Y. A. Olcer, M. Demirkurt, M. M. Demir, A. E. Eroglu 'Development of molecularly imprinted polymers (MIPs) as a solid phase extraction (SPE) sorbent for the determination of ibuprofen in water' *RSC Advances* 7, 31441 (2017).
- 54.** A. İncel, O. Akın, A. Çağır, M. M. Demir, Ü. H. Yıldız 'Smart Phone Assisted Detection and Quantification of Cyanide in Drinking Water by Paper Based Sensing Platform' *Sensors & Actuators: B. Chemical* 252, 886-893 (2017).
- 53.** A. İncel, C. Varlıklı, C. D. McMillen, M. M. Demir 'Triboluminescent Electrospun Mats with Blue-green Emission under Mechanical Force' *The Journal of Physical Chemistry Part C* 121(21), 11709-11716 (2017).
- 52.** A. Çelik, G. Topcu, A. Baba, Y. Akdoğan, U. Şentürk, M. M. Demir 'Experimental modeling of silicate-based geothermal deposits' *Geothermics* 69, 65-73 (2017).
- 51.** T. Isik, M. M. Demir, C. Aydoğan, M. Çiftçi, Y. Yağcı 'Hydrophobic Coatings from Photochemically-Prepared Hydrophilic Polymethacrylates via Electrospraying' *Journal of Polymer Science A: Polymer Chemistry* (2017).
- 50.** A. Çelik, G. Koç, E. Erdoğan, T. Shahwan, A. Baba, M. M. Demir 'Use of Electrospun Fiber Mats for the Remediation of Hypersaline Geothermal Brine' *Desalination and Water Treatment* (2017).
- 49.** A. İncel, M. E. Eanes, C. D. McMillen, M. M. Demir 'Integration of Triboluminescent EuD4TEA Crystals to Transparent Polymers: Impact sensor application' *ACS Applied Materials and Interfaces* 9 (7), 6488-6496 (2017).
- 48.** S.K. Shukla, M. M. Demir, P.P. Govender, A. Tiwari, S.K. Shukla 'Optical fibre based non-enzymatic glucose sensing over Cu²⁺-doped polyaniline hybrid matrix' *Sensors and Actuators: B. Chemical* 242, 522-528 (2017).
- 47.** A. İncel, S. M. Reddy, M. M. Demir 'A new method to extend the stress response of triboluminescent crystals by using hydrogels' *Materials Letters* 186, 210-213 (2017).
- 46.** T. Güner, D. Köseoğlu, M. M. Demir 'Multilayer Design of Hybrid Phosphor Film for Application in LEDs' *Optical Materials* 60, 422-430 (2016).
- 45.** G. Aşkın, V. Çeçen, S. S. Ünlütürk, S. Özçelik, M. M. Demir 'Enthalpy-driven selective loading of CdSe0.75S0.25 nanoalloys in triblock copolymer polystyrene-b-polyisoprene-b-polystyrene' *Materials Today Communications* 8, 91-99 (2016).
- 44.** N. Horzum, D. Mete, E. Karakus, M. Ucuncu, M. Emrullahoglu, M. M. Demir 'Rhodamine-Immobilised Electrospun Chitosan Nanofibrous Mat as a Fluorescence Turn-On Hg²⁺ Sensor' *ChemistrySelect* 1(5), 896-900 (2016).
- 43.** E. Berber, N. Horzum, B. Hazer, M. M. Demir 'Solution electrospinning of polypropylene-based fibers and their application in catalysis' *Fibers and Polymers* 17(5), 760-768 (2016).
- 42.** T. Isik, N. Horzum, U. H. Yıldız, B. Liedberg, M. M. Demir 'Utilization of Electrospun Polystyrene Membranes as a Preliminary Step for Rapid Diagnosis' *Macromolecular Materials and Engineering* 301(7), 827-835 (2016).
- 41.** H. Başoğlu, M. D. Bilgin, M. M. Demir 'Biophysical Characterization of Protoporphyrin IX loaded Magnetoliposomes and In-Vitro Evaluation of Photodynamic Effects' *Photodiagnosis and Photodynamic Therapy* 13, 81-90 (2016).
- 40.** A. İncel, T. Guner, O. Parlak, M. M. Demir* 'Null-Extinction of CeO₂ @ silica Hybrid Particles:Transparent Polystyrene Composites' *ACS Applied Materials and Interfaces* 7(49), 27539-27546 (2015).

- 39.** S. Tuzuner, M.M. Demir 'Dispersion of organophilic Ag nanoparticles in PS-PMMA blends' *Materials Chemistry and Physics* 162, 692-699 (2015).
- 38.** B. Ghouil, A. Harabi, F. Bouzerara, N. Brihi, A. Guechi, B. Boudaira, M. M. Demir, Alberto Figoli 'Development and characterization of tubular composite ceramic membranes using natural alumino-silicates for microfiltration applications' *Materials Characterization* 103, 18-27 (2015).
- 37.** N. Horzum, M. Mari, M. Wagner, M. M. Demir, K. Landfester, D. Crespy, R. Muñoz-Espí*, Controlled surface mineralization of metal oxides on nanofibers' *RSC Advances* 5(47), 37340-37345 (2015).
- 36.** A. Baba, M. M. Demir, G. A. Koç, C. Tuğcu ' Hydrogeological properties of hyper-saline geothermal brine and application of inhibiting siliceous scale via pH modification' *Geothermics* 53, 406-412 (2015).
- 35.** M. M. Demir, A. Taşdemirci, M. Güden, K. Turan 'Mechanical Interlocking between Porous Electrospun Polystyrene Fibers and an Epoxy Matrix' *ACS Appl. Mater. Interface* 6(24), 21901-21905, (2014).
- 34.** N. Horzum, D. Taşçıoğlu, C. Özbeş, S. Okur*, M. M. Demir* 'VOCs sensor based on metal oxide nanofibrous membrane/QCM system prepared by electrospinning' *New Journal of Chemistry* 38, 5761-5768 (2014).
- 33.** S. Acikgoz*, M. M. Demir, Ece Yapasan, Alper Kiraz, Ahmet A. Unal, M. Naci Inci 'Investigation of the Spontaneous Emission Rate of Perylene Dye Molecules Encapsulated into three-dimensional Nanofibers via FLIM Method' *Applied Physics A: Materials Science and Processing* 116 (4) 1867-1875 (2014).
- 32.** M. M. Demir, A. Baba*, V. Atilla, M. İnanlı ' Types of the scaling in hyper saline geothermal system in northwest Turkey ', *Geothermics* 50, 1-9 (2014).
- 31.** E. Boyacı, N. Horzum, A. Çağır, M. M. Demir* and Ahmet E. Eroğlu* 'Electrospun Amino-Functionalized PDMS as a Novel SPME Sorbent for the Speciation of Inorganic and Organometallic Arsenic Species' *RSC Advances*, 3, 22261 (2013).
- 30.** M. M. Demir*, N. Horzum, B. Özen, S. Özçelik 'Hierarchical co-assembly of a cyanine dye in poly(vinyl alcohol) fibrous films by electrospinning', *Journal of Physical Chemistry B*, 117, 10920 (2013).
- 29.** Ö. Tunusoğlu, M. M. Demir* 'Tailored CeO₂ nanoparticle surface in free radical bulk polymerization of methyl methacrylate', *Industrial & Engineering Chemistry Research*, 52 13401 (2013).
- 28.** N. Horzum, M. M. Demir*, Muath, T. Shahwan*, "Chitosan Fiber - Supported Zero-Valent Iron Nanoparticles as a Novel Sorbent for Sequestration of Inorganic Arsenic", *RSC Advances*, 3, 7828, (2013).
- 27.** O. Parlak, M. M. Demir* "Anomalous transmittance of polystyrene/ceria nanocomposites at high particle loadings", *Journal of Materials Chemistry C*, 1, 290-298 (2013).
- 26.** N. Horzum, R. Munoz-Espi, G. Glasser, M. M. Demir, K. Landfester "Hierarchically structured metal oxide/silica nanofibers by colloidal electrospinning" *ACS Applied Materials & Interfaces*, 4 (11), 6338-6345 (2012).
- 25.** N. Horzum, O. Parlak, T. Shahwan, M. M. Demir* Synthesis of amidoximated polyacrylonitrile fibers and its application for sorption of aqueous uranyl ions under continuous flow", *Chemical Engineering Journal*, 213, 41-49 (2012).
- 24.** M. M. Demir*, G. Wegner ' Challenges in the preparation of optical polymer composites with nanosized pigment particles: A review on recent efforts', *Macromolecular Materials and Engineering*, 297, 838-863 (2012). **COVER ARTICLE**
- 23.** Ö. Tunusoğlu, R. Munoz-Espi, Ü. Akbey, M. M. Demir* 'Surfactant-Assisted Formation of Organophilic CeO₂ Nanoparticles', *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 395, 10-17 (2012).
- 22.** O. Parlak, M. M. Demir* Towards Transparent Nanocomposites based on Polystyrene Matrix and PMMA-grafted CeO₂ Nanoparticles', *ACS Applied Materials & Interfaces*, 3, 4306-4314 (2011).
- 21.** N. Horzum, D. Taşçıoğlu, S. Okur, M. M. Demir* Humidity sensing properties of ZnO-based fibers by electrospinning', *Talanta*, 85, 1105-1111 (2011).
- 20.** Ö. Kepenekçi, M. Eanes-Emirdağ*, M. M. Demir* 'Effect of alkali metal hydroxides on the morphological development and optical properties of CeO₂ nanocubes under hydrothermal conditions', *Journal of Nanoscience and Nanotechnology*, 11, 3565-3577 (2011).
- 19.** N. Horzum, E. Boyacı, T. Shahwan, A. E. Eroğlu, M. M. Demir* 'Sorption Efficiency of Chitosan Nanofibers towards Metal Ions at Low Concentrations', *Biomacromolecules*, 11(12) 3301-3308 (2010).
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- 17.** M. M. Demir* 'Investigation on glassy skin formation of porous polystyrene fibers electrospun from DMF' *eXPRESS Polymer Letters*, 4(1), 2-8 (2010).
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Peer Reviewing For Scientific Journals

2012-present Journal of the American Chemical Society
 2012-present Materials Research Bulletin
 2011-present Colloids and Surfaces A: Physicochemical and Engineering Aspect
 2010-present Applied Surface Science
 2009-present ACS Applied Materials & Interfaces
 2008-present Macromolecules
 2008-present Biomacromolecules
 2008-present Applied Catalysis A
 2008-present Nanotechnology
 2008-present EXPRESS Polymer Letters

Supervised MSc and PhD Thesis

2022

Öykü Çağ Hasköylü (MSc) – Kinetics of silica polymerization

2018-2021

* Emre Karaburun (MSc) – Development of a new antiscalant for minimization of Stibnite scaling in geothermal binary plants.

2015-2019

* Gökhan Topcu (PhD) - The fabrication of plasmonic/photonics nanostructures in polymers: Mechanical sensor applications.
 * Ezgi İnci (MSc)- Fabrication of colloidal photonic crystals via Langmuir Blodgett technique and their integration of polymer matrix

2015-2018

* Tuğrul Güner (PhD)- Down-converting polymer composites and their white light applications
 * Tuğba İşık (PhD)- Separation of macromolecules from aqueous systems using electrospun fibers
 * Oktay ACAR (PhD)- Synthesis and characterization of polyimide derivative adhesives

2015-2017

* Aslı Çelik (MSc) - Synthesis of artificial metal (Fe,Mg) silicate deposits under high pressure and temperature conditions and development of polymeric inhibitor for metal silicate scaling

2014-2016

* Anıl İncel (MSc) - Integration of Red & Blue TL Materials to Different Polymer End-Use

2013-2015

* Tuğba İşık (MSc) – Circulating Nucleic Acid (CNA) Separation from Serum by Electrospun Membranes

2012-2014

* Şeyda Bağcı Tüzünler (MSc) – Selective Loading of Organophilic Ag Nanoparticles in PS/PMMA Blend
* Irmak Tunç (MSc)- Synthesis of silicate – based geothermal scales

2008-2013

* Nesrin Horzum Polat (PhD) – Filtration applications of electrospun fiber mats
* Özge Tunusoğlu (PhD) – The influence of CeO₂ nanoparticle surface chemistry on the mechanism of free radical polymerization of MMA

2009-2011

* Onur Parlak (MSc) – Fabrication of transparent polymer nanocomposites containing PMMA grafted CeO₂ particles
* Görkem Aşkın (MSc) – Preparation of electrospun composite fibers based on PS-PI-PS/CdxSe1-x nanoparticles

2008-2010

* Bengisu Özen (MSc) – Investigation on emission features of TTBC aggregates in PVA fiber mats by electrospinning

Organized Congresses

- Chairman 'AMWC 2013: Advanced Materials World Congress (Turkey, September 16-19, 2013)
- Chairman 'JAPMED'10 2017: The Tenth Japanese-Mediterranean and Central European Workshop on Applied Electromagnetic Engineering for Magnetic, Superconducting, Multifunctional and Nano Materials (İzmir, Turkey, July 4-8, 2017)

Courses Thought

Chem 435 Introduction to Polymer Science
MSE 503 Materials Science and Engineering Thermodynamics
MSE 514 Molecular Aspects of Soft Matters
Chem 522 Nanoscience & Nanotechnology
Chem 306 Physicochemistry
Chem 506 Advanced Physicochemistry
Chem 121- General Chemistry

High School Science Projects for TÜBİTAK and International Competition (Dissemination)

2010-2011 - İzmir Türk College
2012 – Maltepe Military School
2014-2016 – Çakabey College
2017 – 2018 TAKEV