

2L-09 ADVANCED MATERIALS SYNTHESIS and RESEARCH LABORATORY

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General Information	<p>-Phthalocyanine, porphyrin perylenebisimide and <i>vic</i>-dioxime derivatives are synthesized for PDT, DSSC, OPV, chemical sensor, biological activity and liquid crystal applications.</p> <p>-The supramolecular interactions of porphyrin and phthalocyanine derivatives with cucurbituril compounds are investigated.</p>	
Applications	<ul style="list-style-type: none">○ UV-Vis spectrophotometer analysis○ Synthesis and characterization complexes, dyes, photosensitizers and bioinorganic compounds	
Laboratory Photo		
Equipment	<ul style="list-style-type: none">○ UV-Vis spectrophotometer (Schimadzu)○ Rotary Evaporator (Heidolph)○ Magnetic stirrers (Heidolph)○ Santrifuge (Hereaus)○ Analytical balance (Ohaus)○ Mechanical stirrer○ Ultrasonic bath	
Projects	<ul style="list-style-type: none">○ TÜBİTAK, 1002 Project (15 November 2019-15 February 2021), 119Z704, Self-Assembled Supramolecular Systems	

for Organic Electronic Applications: Phthalocyanine Rosettes, Project budget: 38.500 TL

- TÜBİTAK, 1001 Project, (March 2019 - September 2021), 118Z736, Synthesis and Photovoltaic Applications of New Phthalocyanine Derivatives as Hole Transfer Materials for Perovskite Based Solar Cells, Project budget: 684.850 TL
- TÜBİTAK, 1002 Project, (February 2019- February 2020), 118Z693, Novel Phthalocyanine Derivatives Substituted with Histone Deacetylase Inhibitor for Cancer Therapy with Chemo- and Photodynamic Therapy, Project budget: 45.000 TL
- GTÜ BAP (October 2019- October 2020), 2019-A-102-23, Synthesis of Zn(II)-phthalocyanines having alkyl and aryl azido functional groups as chemical sensor, Project budget: 10.000 TL
- TÜBİTAK, 1001 Project, (November 2018 - November 2020), 118Z276, Synthesis of new imidazolidindione derivatives and investigation of their antitumoral activities on breast cancer cells, Project budget: 404.850 TL
- TÜBİTAK, 1001 Project, (April 2017- October 2020), 116Z337, Assesment of role of mitochondria targeted new generation bisphthalocyanine photosensitizers under the light radiation, Project budget: 420.500 TL
- GTÜ BAP (August 2017- August 2018), 2017-A102-14, Synthesis and Characterization of Polyricinoleate, Project budget: 7.500 TL
- TÜBİTAK, 2515 COST, (15 November 2014- 15 March 2017), 114M488, Synthesis and Applications of Asymmetric Phthalocyanines for Photovoltaic Technologies, Project budget: 356.300 TL
- GTÜ, BAP, (December 2016- January 2019), 2016-GTÜ-SÜ-03, Development of Li-Air Batteries Containing Phthalocyanine / Graphene Hybrid Systems, Project budget: 49.872 TL
- TÜBİTAK- COST Projesi (Action TD1004), (15 Agust 2013-15 Agust 2015), 113R004, Molecular photodynamic theranostics: Design, synthesis and photophysical, photochemical investigations of original phthalocyanine-Gd dota conjugates, Project budget: 168.800 TL

- GYTE-BAP (2011 September -2012 October), 2011 A-13, 2011, Nickel(II), Palladium(II) and Platinum(II) Complexes of Amino Boradiazaindasin (BODIPY) Substituted *vic*-Dioximes: Synthesis and Investigation of Their Photophysical and Photochemical Properties, Project budget: 4.990 TL
- GYTE-BAP, (June 2010 / June 2011), 2010-A-4, New Type Phthalocyanines for Sensing of Volatile Organic Compounds, Project budget: 5.505 TL
- TÜBİTAK 1001 projesi (15 October 2009-15October 2011) 109M212, Spektroskopik Ve Kuantum Kimyasal Metotlarla Farklı Ftalosiyanın Moleküllerinin Uçucu Organik Bileşiklerle (Uob) Etkileşiminin Aydınlatılması, Project budget: 237.160 TL
- NATO-RUSSIA COLLABORATIVE LINKAGE GRANT (NRCLG), (2008- 2010), Development of new optical sensors for detection of pesticides in water, Project Coordinator from NATO country: Prof.Dr. Assel Hassan, Project Coordinator from the Russian Federation country: Dr Tamara Basova, Other Principal Investigators (Turkish Side Associated Researchers) Prof Dr Vefa Ahsen and Prof Dr Ayşe Gül Gürek, Project budget:: 20.000 USD
- TÜBİTAK-TBAG-U/180, (1 May 2007-1 May 2009), 106T715, New Challenge in Octupolar Architecture for NLO: Constructing the True Octupolar Cube” Project budget: 43.510 TL
- GYTE-BAP, (2007 June- 2009 September). 2007 A-3, Synthesis and investigation of liquid crystalline properties of Nickel(II) and Palladium(II) complexes of alkyl amine and branched- alkylthia-Substituted *vic*-Dioximes, Project budget: 8.700 TL