

## Prof. Muhammet Kasım ŞENER

### Personal Information

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### Education Information

Doctorate, Istanbul Technical University, Fen Bilimleri Enstitüsü, Turkey Continues

Doctorate, Istanbul Technical University, Yabancı Diller Yüksekokulu, İngilizce Hazırlık Programı, Turkey Continues

Sütçü İmam Üniversitesi, Fen Bilimleri Enstitüsü, Turkey Continues

Undergraduate, Erciyes University, Fen Edebiyat Fakültesi, Kimya Bölümü, Turkey Continues

### Dissertations

Doctorate, HACİMLİ ESTERİK SÜBSTİTÜENTLER İÇEREN FTALOSİYANİNLER, İstanbul Teknik Üniversitesi, Fen Bilimleri Enstitüsü, Kimya, 2005

### Research Areas

Chemistry, Inorganic Chemistry, Coordination Chemistry, Natural Sciences

### Academic Titles / Tasks

Professor, Yildiz Technical University, Fen Edebiyat Fakültesi, Kimya Bölümü, 2014 - Continues

### Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Synthesis, photophysical and photochemical properties of unsymmetrical zinc(II) phthalocyanines bearing 8-hydroxyquinoline unit**  
AHMETALİ E., YILDIZ B., Ahi E. E., DURMUŞ M., ŞENER M. K.  
POLYHEDRON, vol.226, 2022 (SCI-Expanded)
- II. **Poly(oxanorbornene)s bearing triphenylphosphonium and PEGylated zinc(ii) phthalocyanine with boosted photobiological activity and singlet oxygen generation**  
AHMETALİ E., Galstyan A., Sueer N. C., EREN T., ŞENER M. K.  
POLYMER CHEMISTRY, 2022 (SCI-Expanded)
- III. **Effect of direct linkage of pyrazole carboxylic acid acceptor/anchoring group on the photovoltaic performance for phthalocyanine-sensitized solar cells**  
YILDIZ B., AHMETALİ E., Arslan B. S., Mengeş N., NEBİOĞLU M., ŞİŞMAN İ., ŞENER M. K.  
DYES AND PIGMENTS, vol.206, 2022 (SCI-Expanded)
- IV. **Zinc(II) phthalocyanine-viologen dyads: synthesis, electrochemistry, spectroelectrochemistry, electrodeposition, and electrochromism**  
YILDIZ B., AHMETALİ E., BUDAK Ö., KOCA A., ŞENER M. K.

NEW JOURNAL OF CHEMISTRY, vol.46, no.16, pp.7410-7423, 2022 (SCI-Expanded)

- V. **Non-aggregating zinc phthalocyanine sensitizer with bulky diphenylphenoxy donor groups and pyrazole-3-carboxylic acid anchoring group for coadsorbent-free dye-sensitized solar cells**  
YILDIZ B., Arslan B. S., Guzel E., NEBİOĞLU M., Mengeş N., ŞİŞMAN İ., ŞENER M. K.  
SOLAR ENERGY, vol.226, pp.173-179, 2021 (SCI-Expanded)
- VI. **Synthesis and antioxidant activity of zinc(II) phthalocyanine tetranitroxide**  
Korkut S., AHMETALİ E., BİLGİ M., Karataş Ö., YERLİ Y., PEKSEL A., ŞENER M. K.  
POLYHEDRON, vol.197, 2021 (SCI-Expanded)
- VII. **Photodynamic therapy activities of phthalocyanine-based macromolecular photosensitizers on MCF-7 breast cancer cells**  
AHMETALİ E., Sen P., Suer N. C., Nyokong T., EREN T., ŞENER M. K.  
JOURNAL OF MACROMOLECULAR SCIENCE PART A-PURE AND APPLIED CHEMISTRY, vol.58, no.11, pp.748-757, 2021 (SCI-Expanded)
- VIII. **Enhanced Light-Driven Antimicrobial Activity of Cationic Poly(oxanorbornene)s by Phthalocyanine Incorporation into Polymer as Pendants**  
AHMETALİ E., Sen P., Suer N. C., AKSU M. B., Nyokong T., EREN T., ŞENER M. K.  
MACROMOLECULAR CHEMISTRY AND PHYSICS, vol.221, no.24, 2020 (SCI-Expanded)
- IX. **An alternative strategy to detect bacterial contamination in milk and water: a newly designed electrochemical biosensor**  
Ozcan S. M., SESAL N. C., ŞENER M. K., KOCA A.  
EUROPEAN FOOD RESEARCH AND TECHNOLOGY, vol.246, no.6, pp.1317-1324, 2020 (SCI-Expanded)
- X. **Unsymmetrically pyrazole-3-carboxylic acid substituted phthalocyanine-based photoanodes for use in water splitting photoelectrochemical and dye-sensitized solar cells**  
YILDIZ B., Guzel E., Akyuz D., Arslan B. S., KOCA A., ŞENER M. K.  
SOLAR ENERGY, vol.191, pp.654-662, 2019 (SCI-Expanded)
- XI. **Pyrazole-3-carboxylic acid as a new anchoring group for phthalocyanine-sensitized solar cells**  
YILDIZ B., Guzel E., Mengeş N., Sisman I., ŞENER M. K.  
SOLAR ENERGY, vol.174, pp.527-536, 2018 (SCI-Expanded)
- XII. **Syntheses of 1,3-bis(2-arylimino)isondoline type ligands and some metal complexes containing EDOT moiety**  
Göktuğ O., Korkut S., Gökçe B. N., Tekbasoglu T. Y., Sener K.  
MAIN GROUP CHEMISTRY, vol.17, no.4, pp.293-299, 2018 (SCI-Expanded)
- XIII. **Enhancing biosensor properties of conducting polymers via copolymerization: Synthesis of EDOT-substituted bis(2-pyridylimino) isoindolato-palladium complex and electrochemical sensing of glucose by its copolymerized film**  
Tekbasoglu T. Y., Soganci T., Ak M., KOCA A., ŞENER M. K.  
BIOSENSORS & BIOELECTRONICS, vol.87, pp.81-88, 2017 (SCI-Expanded)
- XIV. **Synthesis and electropolymerization of EDOT modified 1,3-bis(5-methyl-2-thiazolylimino)isoindolinato palladium(II) complex for electrochemical detection of hydrogen peroxide**  
Goktug O., Akyuz D., KOCA A., ŞENER M. K.  
JOURNAL OF COORDINATION CHEMISTRY, vol.70, no.12, pp.2052-2060, 2017 (SCI-Expanded)
- XV. **Lyotropic liquid crystalline phthalocyanines containing 4-((S)-3,7-dimethyloctyloxy)phenoxy moieties**  
KORKUT S., OCAK H., Bilgin-Eran B., GUZELLER D., ŞENER M. K.  
JOURNAL OF PORPHYRINS AND PHTHALOCYANINES, vol.21, no.1, pp.16-23, 2017 (SCI-Expanded)
- XVI. **Photocatalytic-electrocatalytic dual hydrogen production system**  
Aydemir M., Akyuz D., Agopcan B., ŞENER M. K., Albayrak F. K., Sarzoglu C., KOCA A.  
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.41, no.19, pp.8209-8220, 2016 (SCI-Expanded)
- XVII. **TEMPO-functionalized zinc phthalocyanine: synthesis, magnetic properties, and its utility for electrochemical sensing of ascorbic acid**

- KORKUT S., Akyuz D., ÖZDOĞAN K., YERLİ Y., KOCA A., ŞENER M. K.  
DALTON TRANSACTIONS, vol.45, no.7, pp.3086-3092, 2016 (SCI-Expanded)
- XVIII. **Electrochemical pesticide sensor based on Langmuir-Blodgett film of cobalt phthalocyanine-anthraquinone hybrid**  
Ipek Y., ŞENER M. K., KOCA A.  
JOURNAL OF PORPHYRINS AND PHTHALOCYANINES, vol.19, no.5, pp.708-718, 2015 (SCI-Expanded)
- XIX. **EDOT-Functionalized Calix[4]pyrrole for the Electrochemical Sensing of Fluoride in Water**  
Aydoğan A., KOCA A., ŞENER M. K., Sessler J. L.  
ORGANIC LETTERS, vol.16, no.14, pp.3764-3767, 2014 (SCI-Expanded)
- XX. **Synthesis, photophysicochemical properties and TD-DFT calculations of tetrakis(2-benzoyl-4-chlorophenoxy) phthalocyanines**  
Yilmaz Y., Mack J., ŞENER M. K., Sonmez M., Nyokong T.  
JOURNAL OF PORPHYRINS AND PHTHALOCYANINES, vol.18, no.4, pp.326-335, 2014 (SCI-Expanded)
- XXI. **Photophysical and photochemical properties and TD-DFT calculations of novel zinc and platinum phthalocyanines**  
Yilmaz Y., Mack J., ŞENER M. K., Sonmez M., Nyokong T.  
JOURNAL OF PHOTOCHEMISTRY AND PHOTOBIOLOGY A-CHEMISTRY, vol.277, pp.102-110, 2014 (SCI-Expanded)
- XXII. **Synthesis, thermal, and electrical properties of stilbene-bridged polymeric zinc phthalocyanine**  
Yurtseven H., Kaya M. A., ALTINDAL A., ŞENER M. K.  
DESIGNED MONOMERS AND POLYMERS, vol.17, no.1, pp.58-68, 2014 (SCI-Expanded)
- XXIII. **Diphenylethoxy-substituted metal-free and metallophthalocyanines as potential photosensitizer for photodynamic therapy: synthesis and photophysical and photochemical properties**  
Yilmaz Y., ERDOĞMUŞ A., ŞENER M. K.  
TURKISH JOURNAL OF CHEMISTRY, vol.38, no.6, pp.1083-1093, 2014 (SCI-Expanded)
- XXIV. **Synthesis and electrochemical properties of a double-decker lutetium(III) phthalocyanine bearing electropolymerizable substituents on non-peripheral positions**  
Karadag S., Bozoglu C., ŞENER M. K., KOCA A.  
DYES AND PIGMENTS, vol.100, pp.168-176, 2014 (SCI-Expanded)
- XXV. **Type II photoinitiator substituted zinc phthalocyanine: Synthesis, photophysical and photopolymerization studies**  
KORKUT S., Temel G., Balta D., ARSU N., ŞENER M. K.  
JOURNAL OF LUMINESCENCE, vol.136, pp.389-394, 2013 (SCI-Expanded)
- XXVI. **Photophysical and photochemical properties of novel phthalocyanines bearing non-peripherally substituted mercaptoquinoline moiety**  
Yasa G., Erdogmus A., Ugur A. L., Şener M. K., Avciata U., Nyokong T.  
JOURNAL OF PORPHYRINS AND PHTHALOCYANINES, vol.16, pp.845-854, 2012 (SCI-Expanded)
- XXVII. **Synthesis and characterization of poly{2-[3-(1H-pyrrol-2-yl)phenyl]-1H-pyrrole} and its copolymer with EDOT**  
Turac E., Ak M., Sahmetlioglu E., ŞENER M. K., Kaya M. A.  
RUSSIAN JOURNAL OF GENERAL CHEMISTRY, vol.81, no.12, pp.2510-2516, 2011 (SCI-Expanded)
- XXVIII. **3,4-Ethylenedioxythiophene substituted phthalocyanines**  
Yildiz H. K., Korkut S., KOCA A., Kasim Şener M. K.  
Synthetic Metals, vol.161, pp.1946-1952, 2011 (SCI-Expanded)
- XXIX. **Synthesis of non-peripherally substituted tetra(dihexylmalonate) alcohol soluble phthalocyanines**  
Korkut S., Avciata U., ŞENER M. K.  
JOURNAL OF COORDINATION CHEMISTRY, vol.64, no.16, pp.2936-2944, 2011 (SCI-Expanded)
- XXX. **Synthesis, electrochemistry, spectroelectrochemistry and electrocolorimetry of phthalocyanine-anthraquinone hybrids**  
Sezer B., Sener M. K., KOCA A., ERDOĞMUŞ A., Avciata U.  
SYNTHETIC METALS, vol.160, pp.2155-2166, 2010 (SCI-Expanded)
- XXXI. **Derivatization and in situ metallation of phthalocyanines using click chemistry**

- Yilmaz Y., ŞENER M. K., ERDEN İ., Avciata U.  
POLYHEDRON, vol.28, no.16, pp.3419-3424, 2009 (SCI-Expanded)
- XXXII. **Novel phthalocyanines with naphthalenic substituents**  
ŞENER M. K., Guel A., Kocak M. B.  
TRANSITION METAL CHEMISTRY, vol.33, no.7, pp.867-872, 2008 (SCI-Expanded)
- XXXIII. **Structural and optical studies of tetra (tricarboethoxy)-substituted metallophthalocyanines**  
Sorar I., ŞENER M. K., Tepehan F. Z., Guel A., Koçak M.  
THIN SOLID FILMS, vol.516, no.10, pp.2894-2898, 2008 (SCI-Expanded)
- XXXIV. **Synthesis, electrochemistry and in situ Spectroelectrochemistry of soluble lead phthalocyanines**  
Dincer H. A., Sener M. K., KOCA A., Gül A., Kocak M. B.  
ELECTROCHIMICA ACTA, vol.53, no.9, pp.3459-3467, 2008 (SCI-Expanded)
- XXXV. **Synthesis and Complexation Behaviour of 1,3-Bis(2-pyridylimino)isoindole with Nickel(II)**  
ŞENER M. K.  
ASIAN JOURNAL OF CHEMISTRY, vol.19, no.3, pp.1870-1874, 2007 (SCI-Expanded)
- XXXVI. **Synthesis and electrochemical characterization of biphenyl-malonic ester substituted cobalt, copper, and palladium phthalocyanines**  
ŞENER M. K., Koca A., Guel A., Kocak M. B.  
POLYHEDRON, vol.26, no.5, pp.1070-1076, 2007 (SCI-Expanded)
- XXXVII. **Functionalisation of the 1,3-bis(2-pyridylimino)isoindole (BPI) Ligand via Esterification**  
Şener M. K., Avciata U.  
Journal Of Chemical Research, vol.3, no.3, pp.138-140, 2007 (SCI-Expanded)
- XXXVIII. **Investigation of the electrocatalytic activity of metallophthalocyanine complexes for hydrogen production from water**  
Koca A., Sener M. K., Kocak M. B., Gul A.  
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.31, no.15, pp.2211-2216, 2006 (SCI-Expanded)
- XXXIX. **Synthesis and Crystal Structure of 1,3-Bis(5-formylpyrrol-2-yl)benzene and Its Conversion to a Macrocyclic Derivative**  
Şener M. K., Akkurt M., Yıldırım S., Sessler J. L., Sanchez-Garcia D., Fun H. K.  
TURKISH JOURNAL OF CHEMISTRY, vol.30, no.3, pp.243-251, 2006 (SCI-Expanded)
- XL. **EPR studies on Cu<sup>2+</sup> and Co<sup>2+</sup> complexes of tetraaza porphyrin derivatives**  
Guner S., Sener M. K., Dincer H., Koseoglu Y., Kazan S., Koçak M.  
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, vol.300, no.1, 2006 (SCI-Expanded)
- XLI. **Structure of Di-tert-butyl(3,4-dicyanophenyl)(hydroxy)malonate, C<sub>19</sub>H<sub>22</sub>N<sub>2</sub>O<sub>5</sub>**  
Şener M. K., Akkurt M., Yıldırım S., Koçak M., Fun H. K.  
Analytical Sciences, vol.22, no.22, pp.73-74, 2006 (SCI-Expanded)
- XLII. **Diethyl 2-(3,4-dicyanophenyl)-2-[(2-naphthyl)methyl] malonate**  
Yildirim S., Akkurt M., Sener M., Kocak M., Fun H.  
ACTA CRYSTALLOGRAPHICA SECTION E-CRYSTALLOGRAPHIC COMMUNICATIONS, vol.61, 2005 (SCI-Expanded)
- XLIII. **Electrochemical characterization of phthalocyanine derivatives carrying a bulky triester unit on each benzo group**  
Koca A., Sener M., Kocak M., Gul A.  
TRANSITION METAL CHEMISTRY, vol.30, no.4, pp.399-403, 2005 (SCI-Expanded)
- XLIV. **Studies on reactions of cyclic oxalyl compounds with hydrazines or hydrazones. 2. Synthesis and reactions of 4-benzoyl-1-(4-nitrophenyl)-5-phenyl-1H-pyrazole-3-carboxylic acid**  
Sener A., Kasimogullari R., Sener M. K., Genç H.  
Chemistry of Heterocyclic Compounds, vol.40, no.8, pp.1039-1046, 2004 (SCI-Expanded)
- XLV. **Synthesis and some reactions of 4-benzoyl-5-phenyl-1-pyridin-2-yl-1H-pyrazole-3-carboxylic acid**  
ŞENER M. K., Akbas E., Sener M.  
TURKISH JOURNAL OF CHEMISTRY, vol.28, no.3, pp.271-277, 2004 (SCI-Expanded)
- XLVI. **Studies on the reactions of 4-ethoxycarbonyl-5-phenyl-2,3-dihydro-2,3-furandione with some NH nucleophiles**

- ŞENER M. K., Genc H., Tozlu I., Sener M.  
TURKISH JOURNAL OF CHEMISTRY, vol.28, no.5, pp.659-665, 2004 (SCI-Expanded)
- XLVII. **Synthesis of Tetra(tricarbethoxy)- and Tetra(dicarboxy)- Substituted Soluble Phthalocyanines**  
Şener M. K., Gül A., Koçak M.  
Journal Of Porphyrins And Phthalocyanines, vol.7, no.9, pp.617-622, 2003 (SCI-Expanded)
- XLVIII. **A simple synthesis of 5-ethoxycarbonyl-6-phenyl-1,3-dioxin-4-ones and ethyl 3-benzoyl-4-oxo-2,6-diphenylpyran-5-carboxylate**  
ŞENER M. K., Genc H., Sener M.  
JOURNAL OF HETEROCYCLIC CHEMISTRY, vol.40, no.4, pp.697-700, 2003 (SCI-Expanded)
- XLIX. **Studies on the reactions of cyclic oxalyl compounds with hydrazines or hydrazones: Synthesis and reactions of 4-benzoyl-1-(3-nitrophenyl)-5-phenyl-1H-pyrazole-3-carboxylic acid**  
ŞENER M. K., Kasimogullari R., Sener M., Bildirici I., Akcamur Y.  
JOURNAL OF HETEROCYCLIC CHEMISTRY, vol.39, no.5, pp.869-875, 2002 (SCI-Expanded)
- L. **Antimicrobial activity studies of the binuclear metal complexes derived from tridentate Schiff base ligands**  
Tumer M., Koksall H., Sener M., Serin S.  
TRANSITION METAL CHEMISTRY, vol.24, no.4, pp.414-420, 1999 (SCI-Expanded)

### Articles Published in Other Journals

- I. **Electrochemical pesticide sensor based on anthraquinone substituted copper phthalocyanine**  
Şener M. K., İpek Y., Koca A.  
International Journal of Chemistry and Technology, vol.1, no.1, pp.74-85, 2017 (Peer-Reviewed Journal)

### Refereed Congress / Symposium Publications in Proceedings

- I. **Syntheses of 1 3 Bis 2 arylimino isoindolines and Their Metal Complexes Bearing Electropolymerizable Substituent**  
ŞENER M. K., EKEN KORKUT S.  
6 th Euchems Chemistry Congress, 11 - 15 September 2016
- II. **EPR Studies of stable Free Radical Tempo Substituted Zinc Phthalocyanine**  
EKEN KORKUT S., ÖZDOĞAN K., YERLİ Y., Koca A., ŞENER M. K.  
V. Ulusal Anorganik Kimya Kongresi, Mersin, Turkey, 22 April 2015, pp.36
- III. **Periferal Konumlarında Kiral Karbon Atomu İçeren Liyotropik Sıvı Kristal Ftalosiyanimler, P375**  
EKEN KORKUT S., GUZELLER D., OCAK H., ŞENER M. K., BİLGİN ERAN B.  
5. Ulusal Anorganik Kimya Kongresi, Mersin, Turkey, 22 April 2015
- IV. **Synthesis of Anthraquinone Substituted Cobalt Phthalocyanine**  
EKEN KORKUT S., ŞENER M. K., Koca A.  
All In One Conferences- International Conference on New Trends in Chemistry, Dubai, United Arab Emirates, 24 March 2015, pp.59
- V. **Synthesis of TEMPO Stable Free Radical Appended Zinc Phthalocyanine**  
ŞENER M. K., EKEN KORKUT S., Koca A.  
17.JCF-Frühjahrssymposium, Münster, Germany, 25 March 2015, pp.85
- VI. **Synthesis of Metal-Free and Copper Phthalocyanines Containing Chiral Carbons in the Side**  
EKEN KORKUT S., Güzeller D., OCAK H., BİLGİN ERAN B., ŞENER M. K.  
4th Portuguese Young Chemist Meeting, Coimbra, Portugal, 29 April 2014, pp.16
- VII. **Facile Synthesis of Quaternizable and Water Soluble Zinc Phthalocyanines**  
ŞENER M. K.  
44th World Chemistry Congress, 01 August 2013

- VIII. **Anthraquinone Substituted Cobalt Phthalocyanine Pesticide Biosensor**  
ŞENER M. K.  
44th World Chemistry Congress, 01 August 2013
- IX. **Enzymeless Pesticide Biosensor**  
ŞENER M. K.  
44th World Chemistry Congress, 01 August 2013
- X. **Tip II Fotobaşlatıcı Süstitüe Çinko Ftalosiyanınin Sentezi, Fotopolimerizasyon ve Fotofiziksel Özelliklerinin İncelenmesi**  
ŞENER M. K.  
III. Fiziksel Kimya Günleri, 01 July 2012
- XI. **Synthesis, solvent effects on the photophysical and photochemical properties of novel soluble phthalocyanines bearing mercaptoquinoline moiety improved with the nonperipheral substitution**  
ŞENER M. K.  
ICPP-7, 01 July 2012
- XII. **EDOT Süstitüe Ftalosiyanınler**  
Yıldız H. K., EKEN KORKUT S., ŞENER M. K.  
III. Ulusal Anorganik Kimya Kongresi, Çanakkale, Turkey, 19 May 2011, pp.187
- XIII. **Non Periferal Konumlarda Diester Grubu İçeren Metalli Ftalosiyanınlerin Sentezi**  
EKEN KORKUT S., ŞENER M. K., Avcıata U.  
III. Ulusal Anorganik Kimya Kongresi, Çanakkale, Turkey, 19 May 2011, pp.270
- XIV. **Synthesis of Nonperipherally Tetra Diester Substituted Phthalocyanines**  
ŞENER M. K.  
JCF-Frühjahrssymposium, 01 March 2011
- XV. **Derivatization of Phthalocyanines Using Click Chemistry**  
ŞENER M. K.  
FIGIPAS 09, 01 June 2009
- XVI. **EPR Studies on Cu(II) and Co(II) Complexes of Tetraazaporphyrin Derivatives**  
ŞENER M. K.  
Moscow International Symposium on Magnetism, 01 June 2005

## Supported Projects

ŞENER M. K., Project Supported by Higher Education Institutions, Periferal ve Non-Periferal EDOT Süstitüe Lutesyum Ftalosiyanınlerin Sentezi ve Elektropolimerizasyonu, 2013 - 2016

ŞENER M. K., Project Supported by Higher Education Institutions, Yeni Tip Ftalosiyanınlerin Sentezi, 2011 - 2013

ŞENER M. K., Project Supported by Higher Education Institutions, Redoks Aktif Gruplar İçeren Ftalosiyanınler, 2010 - 2012

## Scientific Refereeing

Journal of Coordination Chemistry, SCI Journal, March 2012

Turkish Journal of Chemistry, SCI Journal, February 2012

## Metrics

Publication: 73

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