

## **Prof. AHMET MUHTAR ÖNAL**

### **Personal Information**

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### **International Researcher IDs**

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### **Education Information**

Doctorate, Middle East Technical University, Faculty of Arts and Sciences, Department of Chemistry, Turkey 1979 - 1983

Postgraduate, Middle East Technical University, Faculty of Arts and Sciences, Department of Chemistry, Turkey 1976 - 1979

Undergraduate, Middle East Technical University, Faculty of Arts and Sciences, Department of Chemistry, Turkey 1971 - 1976

### **Dissertations**

Doctorate, Radiation-induced and electroinitiated polymerization of same epoxy monomers, Middle East Technical University, Faculty of Arts and Sciences, Department of Chemistry, 1983

Postgraduate, Dehydration of Calcium Sulphate Dihydrate in Aqueous Medium, Middle East Technical University, Faculty of Arts and Sciences, Department of Chemistry, 1979

### **Research Areas**

Chemistry, Physical Chemistry, Electrochemistry, Characterization of Polymers, Polymeric Materials, Natural Sciences

### **Academic Titles / Tasks**

Professor, Middle East Technical University, Faculty of Arts and Sciences, Department of Chemistry, 1995 - Continues

Professor, Middle East Technical University, Faculty of Education, Mathematics and Science Education, 1992 - 1995

Associate Professor, Middle East Technical University, Faculty of Education, Mathematics and Science Education, 1988 - 1992

Assistant Professor, Middle East Technical University, Faculty of Education, Mathematics and Science Education, 1986 - 1988

Lecturer PhD, Middle East Technical University, Faculty of Education, Mathematics and Science Education, 1985 - 1986

## Advising Theses

- ÖNAL A. M., Synthesis and polymerization of new D-A-D type monomers bearing fluorinated benzothiadiazole acceptors and their optoelectronic applications, Postgraduate, Y.BOZTAŞ(Student), 2022
- ÖNAL A. M., Preparation and characterization of metal oxide supported group 9b metal nanoparticles and their use as electrocatalysts in water splitting, Doctorate, M.AKBAYRAK(Student), 2022
- ÖNAL A. M., DEVELOPMENT OF THE FUNCTIONAL POLYMER COATINGS BY USING A GREEN APPROACH TO MODIFY PROPERTIES OF DIFFERENT SURFACES, Doctorate, M.TUNA(Student), 2022
- ÖNAL A. M., Investigation on donor, acceptor and substituent effect on phthalimide and thieno[3,4-c]pyrrole-4,6-dione based donor-acceptor-donor type monomers and polymers, Doctorate, D.ÇAKAL(Student), 2021
- ÖNAL A. M., VOLKAN M., Electrochemical detection of dopamine in the presence of excess ascorbic acid using glassy carbon electrodes modified with conducting polymers, Postgraduate, S.ŞANLI(Student), 2018
- ÖNAL A. M., Development of RuO<sub>2</sub>/MO<sub>2</sub> (M = Ti, Zr, Hf, Ce) catalysts for electrocatalytic hydrogen production from water splitting, Postgraduate, E.DEMİR(Student), 2017
- ÖNAL A. M., Synthesis and electropolymerization of new hybrid monomers containing carbazole units, Postgraduate, M.AKBAYRAK(Student), 2016
- ÖNAL A. M., Effect of ring size on benzimidazole acceptor unit on the properties of donor-acceptor-donor type monomers and their electrochromic polymers, Doctorate, E.GÜL(Student), 2015
- ÖNAL A. M., Synthesis of new multifunctional polyfluorene and donor acceptor type polyfluorene derivatives, Doctorate, B.ÇARBAŞ(Student), 2013
- ÖNAL A. M., Synthesis and Characterization of New Conducting Polymer- Nano Particle Composites, Postgraduate, E.EROĞLU(Student), 2013
- ÖNAL A. M., Synthesis of heterocyclic unit substituted carbazole derivatives and their electrochemical polymerization, Postgraduate, H.ESRA(Student), 2013
- ÖNAL A. M., Synthesis of new multifunctional polyfluorene & donor acceptor type polyfluorene derivatives, Doctorate, B.Bezgin(Student), 2012
- ÖNAL A. M., Synthesis of a novel series of furan and fluorene containing monomers and their polymers, Postgraduate, A.GÜNEŞ(Student), 2011
- ÖNAL A. M., Önal A., Color engineering of  $\pi$ -conjugated donor-acceptor systems ; Doctorate, M.İçli(Student), 2011
- ÖNAL A. M., Önal A., Soluble Alkyl Substituted Poly(3,4Propylenedioxyselephne)s : a novel platform for Optoelectronic materials, Postgraduate, S.Atak(Student), 2011
- ÖNAL A. M., Color engineering of  $\pi$ -conjugated donor-acceptor systems: The role of donor and acceptor units on the neutral state color, Doctorate, M.İÇLİ(Student), 2011
- ÖNAL A. M., Design, synthesis and electropolymerization of a new chemiluminescent terthienyl system, Postgraduate, N.Atılgan(Student), 2008
- ÖNAL A. M., Desing, synthesis and electropolymerization of a new chemiluminescent terthienyl system, Postgraduate, N.ATILGAN(Student), 2008
- ÖNAL A. M., A glow in the dark: Synthesis and electropolymerization of chemiluminescent thiophene derivatives, Postgraduate, D.ASİL(Student), 2008
- ÖNAL A. M., Synthesis, characterization, and polymerization of polyether bridged thiophene and aniline derivatives, Doctorate, S.TİRKEŞ(Student), 2008
- ÖNAL A. M., Electrochemical synthesis of crowned conducting polymers : nature of radical cations in polymerization and mechanism of conductivity, Doctorate, A.Cihaner(Student), 2004
- ÖNAL A. M., Electrochemical sysnthesis of crowned conducting polymers: Nature of radical cations in polymerization and mechanism of conductivity, Doctorate, A.CİHANER(Student), 2004
- ÖNAL A. M., Electrochemical polymerization of 2-aminofluorene, fluorene, and 9-fluorenone, Postgraduate, T.İMAMOĞLU(Student), 2003
- ÖNAL A. M., Electrochemical polymerization of aminofluorene, fluorene, and fluorenone, Postgraduate, T.İmamoğlu(Student), 2003
- ÖNAL A. M., Spectroelectrochemical investigations of pyrimidine-2-thionato-bridged binuclear platinum (III) complexes., Postgraduate, Ö.ÖZBEK(Student), 2002
- ÖNAL A. M., Anionic polymerization of styrene oxide, Postgraduate, H.GÜLER(Student), 2000

ÖNAL A. M., Chemical and electrochemical polymerization of halogenated anilines, Postgraduate, A.ÇİHANER(Student), 2000

ÖNAL A. M., Electrochemical synthesis of some conducting polymers and investigations of their conduction mechanism ESR technique, Postgraduate, B.DEMİRBOĞA(Student), 1998

ÖNAL A. M., Polymerization of styrene oxide by using nickel ethyl xanthate as an initiator, Doctorate, N.Kayatürk(Student), 1996

ÖNAL A. M., Polymerization of styrene oxide by using nickel ethyl xanthate as an initiate, Doctorate, N.KAYATÜRK(Student), 1996

ÖNAL A. M., Electrochemical behaviour of some metal complexes containing sulphur ligands, Postgraduate, Ş.ÖZALP(Student), 1993

ÖNAL A. M., Polymerization of allylbenzene., Postgraduate, K.SOUSY(Student), 1988

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

- I. **Fluorine atom effect in D-A-D type conjugated small molecules and polymers**  
Önal A. M., Çakal D., Boztaş Y.  
POLYMER, vol.307, 2024 (SCI-Expanded)
- II. **Theoretical and experimental investigation of bridging atom effect on the fluorene and silafluorene based trimeric monomers and their corresponding polymers**  
DEMİR ARABACI E., YILDIRIM E., ÖNAL A. M.  
Dyes and Pigments, vol.216, 2023 (SCI-Expanded)
- III. **Synthesis and Characterization of a Luminol Based Chemiluminescent Trimeric System**  
Kesimal B., Balci B., Cakal D., ÖNAL A. M., Cihaner A.  
Journal of Fluorescence, vol.33, no.4, pp.1525-1535, 2023 (SCI-Expanded)
- IV. **D-A-D type conjugated polymers in dual electrochromic devices tuning from green to blue colors**  
İÇLİ ÖZKUT M., ÖNAL A. M., Cihaner A.  
Synthetic Metals, vol.296, 2023 (SCI-Expanded)
- V. **Effect of phthalimide and thieno[3,4-c]pyrrole-4,6,dione acceptors on  $\pi$ -conjugated donor-acceptor-donor monomers: Experimental and theoretical investigations of photophysical and electrochemical properties**  
ÇAKAL D., DEMİR ARABACI E., YILDIRIM E., Cihaner A., ÖNAL A. M.  
Tetrahedron, vol.140, 2023 (SCI-Expanded)
- VI. **Side chain effect on the electrochemical and optical properties of thieno[3,4-c]pyrrole-4,6-dione based donor-acceptor donor type monomers and polymers**  
ÇAKAL D., DEMİR ARABACI E., YILDIRIM E., ÇİHANER A., ÖNAL A. M.  
MOLECULAR SYSTEMS DESIGN & ENGINEERING, vol.8, no.1, pp.65-78, 2023 (SCI-Expanded)
- VII. **The Utilization of Iridium Nanoparticles Impregnated on Metal Oxides (Ceria, Titania, and Zirconia) with a Simple and Ecologically Safe Synthesis Approach in Oxygen Evolution Reactions**  
AKBAYRAK M., ÖNAL A. M.  
Journal of the Electrochemical Society, vol.169, no.7, 2022 (SCI-Expanded)
- VIII. **Synthesis and electropolymerization of donor-acceptor-donor type monomers based on azobenzene-substituted thieno[3,4-c]pyrrole-4,6-dione acceptors**  
ÇAKAL D., ÇİHANER A., ÖNAL A. M.  
ELECTROCHIMICA ACTA, vol.398, 2021 (SCI-Expanded)
- IX. **Metal oxides supported cobalt nanoparticles: Active electrocatalysts for oxygen evolution reaction**  
AKBAYRAK M., ÖNAL A. M.  
ELECTROCHIMICA ACTA, vol.393, 2021 (SCI-Expanded)
- X. **Polyhedral oligomeric silsesquioxanes appended conjugated soluble polymers based on thieno[3,4-c]pyrrole-4,6,dione acceptor unit**  
ÇAKAL D., ÇİHANER A., ÖNAL A. M.

ELECTROCHIMICA ACTA, vol.377, 2021 (SCI-Expanded)

- XI. **Effect of the donor units on the properties of fluorinated acceptor based systems**  
Çakal D., Akdağ A., Cihaner A., Önal A. M.  
Dyes and Pigments, vol.185, 2021 (SCI-Expanded)
- XII. **High Durability and Electrocatalytic Activity Toward Hydrogen Evolution Reaction with Ultralow Rhodium Loading on Titania**  
AKBAYRAK M., ÖNAL A. M.  
JOURNAL OF THE ELECTROCHEMICAL SOCIETY, vol.167, no.15, 2020 (SCI-Expanded)
- XIII. **Effect of fluorine substituted benzothiadiazole on electro-optical properties of donor-acceptor-donor type monomers and their polymers**  
ÇAKAL D., Ercan Y. E., ÖNAL A. M., CİHANER A.  
DYES AND PIGMENTS, vol.182, 2020 (SCI-Expanded)
- XIV. **Binder- free iridium based electrocatalysts: Facile preparation, high activity and outstanding stability for hydrogen evolution reaction in acidic medium**  
AKBAYRAK M., ÖNAL A. M.  
JOURNAL OF COLLOID AND INTERFACE SCIENCE, vol.580, pp.11-20, 2020 (SCI-Expanded)
- XV. **Ceria Supported Nickel(0) Nanoparticles: A Highly Active and Low Cost Electrocatalyst for Hydrogen Evolution Reaction**  
DEMİR ARABACI E., ÖNAL A. M., ÖZKAR S.  
JOURNAL OF THE ELECTROCHEMICAL SOCIETY, vol.167, no.10, 2020 (SCI-Expanded)
- XVI. **Cross-exchange of donor units in donor-acceptor-donor type conjugated molecules: Effect of symmetrical and unsymmetrical linkage on the electrochemical and optical properties**  
Eroglu D., ERGÜN E. G. C., ÖNAL A. M.  
TETRAHEDRON, vol.76, no.19, 2020 (SCI-Expanded)
- XVII. **Synthesis and electropolymerization of thieno[3,4-c]pyrrole-4,6-dione based donor-acceptor-donor type monomers**  
ÇAKAL D., CİHANER A., ÖNAL A. M.  
JOURNAL OF ELECTROANALYTICAL CHEMISTRY, vol.862, 2020 (SCI-Expanded)
- XVIII. **Efficient Ceria-Supported Rhodium Nanoparticles as an Electrocatalyst for Hydrogen Evolution**  
Akbayrak M., Önal A. M.  
JOURNAL OF THE ELECTROCHEMICAL SOCIETY, vol.166, no.16, 2019 (SCI-Expanded)
- XIX. **Nanowires assembled from iron manganite nanoparticles: Synthesis, characterization, and investigation of electrocatalytic properties for water oxidation reaction**  
Çetin A., Önal A. M., Esenturk E.  
Journal of Materials Research, vol.34, pp.3231-3239, 2019 (SCI-Expanded)
- XX. **Investigation of Fluorine Atom Effect on Benzothiadiazole Acceptor Unit in Donor Acceptor Donor Systems**  
Çakal D., Boztas Y., Akdağ A., Önal A. M.  
JOURNAL OF THE ELECTROCHEMICAL SOCIETY, vol.166, 2019 (SCI-Expanded)
- XXI. **Chromium substituted iron oxide nanowires as affordable electrocatalysts for oxygen evolution reaction**  
Kocabas S., Çetin A., Önal A. M., Esenturk E.  
JOURNAL OF NANOPARTICLE RESEARCH, vol.21, 2019 (SCI-Expanded)
- XXII. **Magnesium substituted cobalt spinel nanostructures for electrocatalytic water oxidation**  
Ekebas E., Çetin A., Önal A. M., Nalbant Esentürk E.  
JOURNAL OF APPLIED ELECTROCHEMISTRY, vol.49, pp.315-325, 2019 (SCI-Expanded)
- XXIII. **Electrochemical and optical properties of substituted phthalimide based monomers and electrochemical polymerization of 3,4-ethylenedioxythiophene-polyhedral oligomeric silsesquioxane (POSS) analogue**  
Çakal D., Ertan S., Cihaner A., Önal A. M.  
DYES AND PIGMENTS, vol.161, pp.411-418, 2019 (SCI-Expanded)

- XXIV. **Ceria supported ruthenium(0) nanoparticles: Highly efficient catalysts in oxygen evolution reaction**  
DEMİR ARABACI E., AKBAYRAK S., ÖNAL A. M., ÖZKAR S.  
JOURNAL OF COLLOID AND INTERFACE SCIENCE, vol.534, pp.704-710, 2019 (SCI-Expanded)
- XXV. **Titania, zirconia and hafnia supported ruthenium(0) nanoparticles: Highly active hydrogen evolution catalysts**  
DEMİR ARABACI E., AKBAYRAK S., ÖNAL A. M., ÖZKAR S.  
JOURNAL OF COLLOID AND INTERFACE SCIENCE, vol.531, pp.570-577, 2018 (SCI-Expanded)
- XXVI. **Synthesis and electrochemical polymerization of D-A-D type monomers with thieno [3,4-c] pyrrole-4,6-dione acceptor unit**  
Çakal D., Ertan S., Cihaner A., Önal A. M.  
DYES AND PIGMENTS, vol.158, pp.175-182, 2018 (SCI-Expanded)
- XXVII. **Electrochemical and optical properties of dicyclohexylmethyl substituted poly(3,4-propylenedioxythiophene) analogue**  
Çakal D., Cihaner A., Önal A. M.  
JOURNAL OF APPLIED POLYMER SCIENCE, vol.135, 2018 (SCI-Expanded)
- XXVIII. **Carbazole based electrochromic polymers bearing ethylenedioxy and propylenedioxy scaffolds**  
ERGÜN E. G. C., ÖNAL A. M.  
JOURNAL OF ELECTROANALYTICAL CHEMISTRY, vol.815, pp.158-165, 2018 (SCI-Expanded)
- XXIX. **Nanoceria-Supported Ruthenium(0) Nanoparticles: Highly Active and Stable Catalysts for Hydrogen Evolution from Water**  
DEMİR ARABACI E., Akbayrak S., ÖNAL A. M., AKBAYRAK S.  
ACS APPLIED MATERIALS & INTERFACES, vol.10, no.7, pp.6299-6308, 2018 (SCI-Expanded)
- XXX. **NEW EDOT CONTAINING POLYMERS: EFFECT OF RING SIZE ON THE BENZIMIDAZOLE ACCEPTOR**  
Cansu-Ergun E. G., ÖNAL A. M., CİHANER A.  
ELECTROCHIMICA ACTA, vol.188, pp.165-174, 2016 (SCI-Expanded)
- XXXI. **Synthesis and electrochemical polymerization of diketopyrrolopyrrole based donor-acceptor-donor monomers containing 3,6-and 2,7-linked carbazoles**  
Akbayrak M., Önal A. M.  
POLYMER CHEMISTRY, vol.7, pp.6110-6119, 2016 (SCI-Expanded)
- XXXII. **Synthesis and Electrochemical Polymerization of Dithienosilole-Based Monomers Bearing Different Donor Units**  
Eken S., Ergun E. G. C., ÖNAL A. M.  
JOURNAL OF THE ELECTROCHEMICAL SOCIETY, vol.163, no.6, 2016 (SCI-Expanded)
- XXXIII. **Propylenedioxy and Benzimidazole Based Electrochromic Polymers**  
Cansu-Ergun E. G., ÖNAL A. M., CİHANER A.  
JOURNAL OF THE ELECTROCHEMICAL SOCIETY, vol.163, no.5, 2016 (SCI-Expanded)
- XXXIV. **Synthesis and electro-optical properties of a new copolymer based on EDOT and carbazole**  
AKBAYRAK M., ERGÜN E. G. C., ÖNAL A. M.  
DESIGNED MONOMERS AND POLYMERS, vol.19, no.7, pp.679-687, 2016 (SCI-Expanded)
- XXXV. **Electrochemical synthesis of new conjugated polymers based on carbazole and furan units**  
Oguzturk H. E., TİRKEŞ S., ÖNAL A. M.  
JOURNAL OF ELECTROANALYTICAL CHEMISTRY, vol.750, pp.1-8, 2015 (SCI-Expanded)
- XXXVI. **Electrochemical polymerization of a new low-voltage oxidized thienylenepyrrole-derivative and its electrochromic device application**  
Carbas B. B., KIVRAK A., TEKE E., ZORA M., ÖNAL A. M.  
JOURNAL OF ELECTROANALYTICAL CHEMISTRY, vol.729, pp.15-20, 2014 (SCI-Expanded)
- XXXVII. **Spectroelectrochemical investigations of pyrimidine-2-thionato-bridged binuclear platinum(III) complexes**  
Ozbek O., ÖZALP YAMAN Ş., ÖZKAN İ., ÖNAL A. M., İŞÇİ H.  
POLYHEDRON, vol.74, pp.122-128, 2014 (SCI-Expanded)
- XXXVIII. **A new blue light emitting and electrochromic polyfluorene derivative for display applications**

- Carbas B. B., Asil D., Friend R. H., ÖNAL A. M.  
ORGANIC ELECTRONICS, vol.15, no.2, pp.500-508, 2014 (SCI-Expanded)
- XXXIX. **Electrochemical Behavior of Hydrazine Borane in Methanol Solution**  
Ozhava D., ÖNAL A. M., ÖZKAR S.  
JOURNAL OF THE ELECTROCHEMICAL SOCIETY, vol.161, no.12, 2014 (SCI-Expanded)
- XL. **Synthesis of New Thienylene Pyrrole Monomers and Their Electropolymerizations**  
Eken S., Carbas B. B., AKDAĞ A., ÖNAL A. M.  
JOURNAL OF THE ELECTROCHEMICAL SOCIETY, vol.161, no.14, 2014 (SCI-Expanded)
- XLI. **Optical and Electronic Properties of Fluorene-Based Copolymers and Their Sensory Applications**  
Ibrahimova V., Kocak M. E., ÖNAL A. M., TUNCEL D.  
JOURNAL OF POLYMER SCIENCE PART A-POLYMER CHEMISTRY, vol.51, no.4, pp.815-823, 2013 (SCI-Expanded)
- XLII. **Synthesis and electro-optical properties of new conjugated hybrid polymers based on furan and fluorene units**  
Gunes A., CİHANER A., ÖNAL A. M.  
ELECTROCHIMICA ACTA, vol.89, pp.339-345, 2013 (SCI-Expanded)
- XLIII. **Furan and benzochalcogenodiazole based multichromic polymers via a donor-acceptor approach**  
İçli Özkut M., İPEK H., Karabay B., CİHANER A., ÖNAL A. M.  
POLYMER CHEMISTRY, vol.4, no.8, pp.2457-2463, 2013 (SCI-Expanded)
- XLIV. **Synthesis and electropolymerization of an ion sensing and fluorescent fluorene derivative bearing a quinoxaline moiety and its analogues with different donor units**  
KIVRAK A., Carbas B. B., ZORA M., ÖNAL A. M.  
REACTIVE & FUNCTIONAL POLYMERS, vol.72, no.9, pp.613-620, 2012 (SCI-Expanded)
- XLV. **Synthesis and electropolymerization of a new ion sensitive ethylenedioxy-substituted terthiophene monomer bearing a quinoxaline moiety**  
Carbas B. B., Kivrak A., ZORA M., ÖNAL A. M.  
JOURNAL OF ELECTROANALYTICAL CHEMISTRY, vol.677, pp.9-14, 2012 (SCI-Expanded)
- XLVI. **New fluorene-xanthene-based hybrid electrochromic and fluorescent polymers via donor-acceptor approach**  
Carbas B. B., ÖNAL A. M.  
ELECTROCHIMICA ACTA, vol.66, pp.38-44, 2012 (SCI-Expanded)
- XLVII. **Substituent and heteroatom effects on the electrochromic properties of similar systems**  
İcli-Ozkut M., Mersini J., ÖNAL A. M., CİHANER A.  
JOURNAL OF POLYMER SCIENCE PART A-POLYMER CHEMISTRY, vol.50, no.4, pp.615-621, 2012 (SCI-Expanded)
- XLVIII. **Members of CMY Color Space: Cyan and Magenta Colored Polymers Based on Oxadiazole Acceptor Unit**  
Ozkut M. I., Algi M. P., Oztas Z., Algi F., ÖNAL A. M., CİHANER A.  
MACROMOLECULES, vol.45, no.2, pp.729-734, 2012 (SCI-Expanded)
- XLIX. **Donor-acceptor polymer electrochromes with cyan color: Effect of alkyl chain length on doping processes**  
Celikbilek O., İcli-Ozkut M., Algi F., ÖNAL A. M., CİHANER A.  
ORGANIC ELECTRONICS, vol.13, no.1, pp.206-213, 2012 (SCI-Expanded)
- L. **A new processable electrochromic polymer based on an electron deficient fluorene derivative with a high coloration efficiency**  
Carbas B. B., Kivrak A., ÖNAL A. M.  
ELECTROCHIMICA ACTA, vol.58, pp.223-230, 2011 (SCI-Expanded)
- LI. **Electropolymerization of a New 4-(2,5-Di-2-thiophen-2-yl-pyrrol-1-yl)-Tetra Substituted Nickel Phthalocyanine Derivative**  
Yavuz A., Carbas B. B., Aras L., ÖNAL A. M.  
JOURNAL OF APPLIED POLYMER SCIENCE, vol.122, no.2, pp.1293-1299, 2011 (SCI-Expanded)
- LII. **Soluble Alkyl Substituted Poly(3,4-Propylenedioxy-selenophene)s: A New Platform For Optoelectronic Materials**

Atak S., Icli-Ozkut M., ÖNAL A. M., CİHANER A.

JOURNAL OF POLYMER SCIENCE PART A-POLYMER CHEMISTRY, vol.49, no.20, pp.4398-4405, 2011 (SCI-Expanded)

- LIII. **Synthesis of a novel fluorescent and ion sensitive monomer bearing quinoxaline moieties and its electropolymerization**  
Carbas B. B., KIVRAK A., ZORA M., ÖNAL A. M.  
REACTIVE & FUNCTIONAL POLYMERS, vol.71, no.5, pp.579-587, 2011 (SCI-Expanded)
- LIV. **A blue to highly transmissive soluble electrochromic polymer based on poly(3,4-propylenedioxyphenylene) with a high stability and coloration efficiency**  
Ozkut M. I., Atak S., ÖNAL A. M., CİHANER A.  
JOURNAL OF MATERIALS CHEMISTRY, vol.21, no.14, pp.5268-5272, 2011 (SCI-Expanded)
- LV. **Donor-Acceptor Polymer Electrochromes with Tunable Colors and Performance**  
Icli M., Pamuk M., Algi F., ÖNAL A. M., CİHANER A.  
CHEMISTRY OF MATERIALS, vol.22, no.13, pp.4034-4044, 2010 (SCI-Expanded)
- LVI. **A new soluble neutral state black electrochromic copolymer via a donor-acceptor approach**  
Icli M., Pamuk M., Algi F., ÖNAL A. M., CİHANER A.  
ORGANIC ELECTRONICS, vol.11, no.7, pp.1255-1260, 2010 (SCI-Expanded)
- LVII. **Electrochromic performance and ion sensitivity of a terthienyl based fluorescent polymer**  
Atilgan N., CİHANER A., ÖNAL A. M.  
REACTIVE & FUNCTIONAL POLYMERS, vol.70, no.4, pp.244-250, 2010 (SCI-Expanded)
- LVIII. **Electrochemical copolymerization and characterization of dianilines linked by polyether bridge with aniline**  
TİRKEŞ S., ÖNAL A. M.  
JOURNAL OF APPLIED ELECTROCHEMISTRY, vol.40, no.4, pp.865-873, 2010 (SCI-Expanded)
- LIX. **Synthesis and electropolymerization of the phthiocyanines with 4-(2,5-di-2-thiophen-2-yl-pyrrol-1-yl) substituents**  
Yavuz A., Bezgin B., Aras L., ÖNAL A. M.  
JOURNAL OF ELECTROANALYTICAL CHEMISTRY, vol.639, pp.116-122, 2010 (SCI-Expanded)
- LX. **Electrochemical polymerization of an electron deficient fluorene derivative bearing ethylenedioxythiophene side groups**  
Bezgin B., ÖNAL A. M.  
ELECTROCHIMICA ACTA, vol.55, no.3, pp.779-784, 2010 (SCI-Expanded)
- LXI. **Synthesis and Characterization of a New Conducting Polymer Based on 4-(2,5-di-2-thiophen-2-yl-pyrrol-1-yl)-phthalonitrile**  
Yavuz A., Bezgin B., ÖNAL A. M.  
JOURNAL OF APPLIED POLYMER SCIENCE, vol.114, no.5, pp.2685-2690, 2009 (SCI-Expanded)
- LXII. **Electropolymerization and ion sensitivity of chemiluminescent thienyl systems**  
ASİL ALPTEKİN D., CİHANER A., ÖNAL A. M.  
ELECTROCHIMICA ACTA, vol.54, no.26, pp.6740-6746, 2009 (SCI-Expanded)
- LXIII. **Synthesis and properties of a novel redox driven chemiluminescent material built on a terthienyl system**  
Atilgan N., Algi F., ÖNAL A. M., CİHANER A.  
TETRAHEDRON, vol.65, pp.5776-5781, 2009 (SCI-Expanded)
- LXIV. **Electrochemical co-polymerization of a novel fluorene derivative with 3,4-ethylenedioxythiophene**  
Bezgin B., Yagan A., ÖNAL A. M.  
JOURNAL OF ELECTROANALYTICAL CHEMISTRY, vol.632, pp.143-148, 2009 (SCI-Expanded)
- LXV. **Template-free microsphere and hollow sphere formation of polymethylanilines**  
Icli M., ÖNAL A. M., CİHANER A.  
POLYMER INTERNATIONAL, vol.58, no.6, pp.674-679, 2009 (SCI-Expanded)
- LXVI. **A glow in the dark: synthesis and electropolymerization of a novel chemiluminescent terthienyl system**

- ASİL ALPTEKİN D., CİHANER A., ÖNAL A. M.  
CHEMICAL COMMUNICATIONS, no.3, pp.307-309, 2009 (SCI-Expanded)
- LXVII. **Electrochemical polymerization of 9-fluorencarboxylic acid and its electrochromic device application**  
Bezgin B., CİHANER A., ÖNAL A. M.  
THIN SOLID FILMS, vol.516, no.21, pp.7329-7334, 2008 (SCI-Expanded)
- LXVIII. **A novel conducting polymer based on terthienyl system bearing strong electron-withdrawing substituents and its electrochromic device application**  
ASİL ALPTEKİN D., CİHANER A., ALGI F., ÖNAL A. M.  
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- LXXV. **Synthesis and electrochemistry of Group 6 tetracarbonyl (N,N'-bis(ferrocenylmethylene)ethylenediamine)metal(0) complexes**  
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### Refereed Congress / Symposium Publications in Proceedings

- I. **Synthesis and Electrochemical Polymerization of Diketopyrrolopyrrole Based Donor-Acceptor-Donor Monomers Containing 3,6- and 2,7-linked Carbazoles**  
ÖNAL A. M., AKBAYRAK M.  
The 69th Annual Meeting of the International Society of Electrochemistry, 2 - 07 September 2018
- II. **Synthesis and Characterization of Some Carbazole Based Electrochromic Polymers**  
CANSU ERGÜN E. G., ÖNAL A. M.  
Uluslararası Katılımlı VII. Polimer Bilim ve Teknoloji Kongresi, Eskişehir, Turkey, 9 - 12 September 2018
- III. **SYNTHESIS AND ELECTROPOLYMERIZATION OF NEW HYBRID MONOMERS CONTAINING CARBAZOLE UNITS**  
AKBAYRAK M., ÖNAL A. M.  
International Congress on Semiconductor Materials and Devices (ICSMD-2017), 17 August 2016 - 19 August 2017
- IV. **Spinel Metal Oxide Nanoparticles: Synthesis, Characterization and Catalytic Activities towards Water Oxidation**  
ÇETİN A., ÖNAL A. M., NALBANT ESENTÜRK E.  
Nano TR13, 22 - 25 October 2017
- V. **Karbazol Birimleri İçeren Yeni Hibrit Monomerlerin Sentezi Ve Elektrokimyasal Polimerizasyonu**  
AKBAYRAK M., ÖNAL A. M.  
29. Ulusal Kimya Kongresi, Turkey, 10 - 14 September 2017
- VI. **Polymerization of novel donor acceptor type functional fluorene derivatives at C-9 position**  
ÇARBAŞ B., Kıvrak A., ÖNAL A. M., ZORA M.  
243rd National Spring Meeting of the American-Chemical-Society, California, United States Of America, 25 - 29 March 2012, vol.243
- VII. **Electrochemical and chemical oxidation of  $K(C_2H_5OCS_2)$ ,  $[Ni(C_2H_5OCS_2)_2]$  and  $[Ni(C_2H_5)_4]$   $[Ni(C_2H_5OCS_2)_3]$**   
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### Supported Projects

ÖNAL A. M., ŞANLI S., Project Supported by Higher Education Institutions, İLETKEN POLİMERLER İLE MODİFİYE EDİLMİŞ

CAMSI KARBON ELEKTROTTLERİN ANTİOKSİDANTLARIN ELEKTROKİMYASAL TAYİNİNDE KULLANILMASI, 2018 - 2019  
ÖNAL A. M., ÇAKAL D., Project Supported by Higher Education Institutions, YENİ KONJUGE HİBRİT MONOMERLERİN SENTEZİ, POLİMERLEŞTİRİLMİŞ VE OPTOELEKTRONİK UYGULAMALARI, 2018 - 2019  
ÖNAL A. M., AKBAYRAK M., Project Supported by Higher Education Institutions, METAL OKSİTLERLE DESTEKLENMİŞ GRUP 9B METAL NANOPARÇACIKLARININ HAZIRLANMASI. TANIMLANMASI VE ELEKTROKİMYASAL KATALİZÖRLER OLARAK SUYUN AYRIŞMASINDA KULLANILMASI, 2018 - 2019  
ÖNAL A. M., DEMİR E., Project Supported by Higher Education Institutions, ORGANİK MOLEKÜLLERİN ELEKTRO-OKSİDASYONU İÇİN YÜKSEK KATALİTİK PERFORMANSA FOR ELEKTRO-OXİDATION OF ORGANIC MOLECULES, 2018 - 2019  
TOPPARE L. K., ÖNAL A. M., ESENTÜRK O., DANIŞMAN M. F., EREL GÖKTEPE İ., ÇIRPAN A., ASİL ALPTEKİN D., HACALOĞLU J., Project Supported by Higher Education Institutions, İletken Kopolimer Bazlı Alkol Biyosensörleri Geliştirilmesi, 2018 - 2019  
ÖNAL A. M., Project Supported by Higher Education Institutions, Donör-Akseptör-Donör Sisteminde Tasarlanmış Polimerin Elektrokimyasal Ve Kimyasal Yöntemle Sentezi, 2010 - 2019  
ÖNAL A. M., Project Supported by Higher Education Institutions, YENİ KONJUGE HİBRİT MONOMERLERİN SENTEZİ, POLİMERLEŞTİRİLMİŞ VE OPTOELEKTRONİK UYGULAMALARI, 2017 - 2017  
ÖNAL A. M., Project Supported by Higher Education Institutions, ELEKTROKATALİTİK HİDROJEN GAZI SALINIMINDA KULLANILMAK ÜZERE MODİFİYE EDİLMİŞ ELEKTROTTLARIN HAZIRLANMASI, 2017 - 2017  
TOPPARE L. K., ÖNAL A. M., ESENTÜRK O., AZERİ Ö., BÜBER E., DANIŞMAN M. F., EREL GÖKTEPE İ., ÇIRPAN A., ASİL ALPTEKİN D., HACALOĞLU J., Project Supported by Higher Education Institutions, Farklı makroyapılar kullanılarak iletken polimer bazlı çeşitli alkol biyosensörlerinin geliştirilmesi, 2017 - 2017  
ESENTÜRK O., ÖNAL A. M., DOĞAN Ö., DANIŞMAN M. F., ASİL ALPTEKİN D., AYTEKİN Y. S., HACALOĞLU J., PERSİL ÇETİNKOL Ö., Project Supported by Higher Education Institutions, ŞARAP KALİTE TAYİNİ İÇİN YÖNTEM GELİŞTİRME ÇALIŞMALARI, 2016 - 2016  
ÖNAL A. M., Project Supported by Higher Education Institutions, FEN BİLİMLERİ ENSTİTÜSÜ/LİSANSÜSTÜ TEZ PROJESİ, 2014 - 2016  
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ESENTÜRK O., ÖNAL A. M., DANIŞMAN M. F., HACALOĞLU J., Project Supported by Higher Education Institutions, AKTİF FARMASÖTİK MALZEME ANALİZİ İÇİN ALTERNATİF YÖNTEM GELİŞTİRİLMESİ, 2014 - 2015  
ÖNAL A. M., Project Supported by Higher Education Institutions, FEN BİLİMLERİ ENSTİTÜSÜ/LİSANSÜSTÜ TEZ PROJESİ, 2014 - 2015  
ÖNAL A. M., Project Supported by Higher Education Institutions, FEN BİLİMLERİ ENSTİTÜSÜ/LİSANSÜSTÜ TEZ PROJESİ, 2014 - 2014  
ÖNAL A. M., Project Supported by Higher Education Institutions, FEN BİLİMLERİ ENSTİTÜSÜ/LİSANSÜSTÜ TEZ PROJESİ, 2014 - 2014  
ÖNAL A. M., CANSU E. G., Project Supported by Higher Education Institutions, BOR ESASLI YENİ ANORGANİK-ORGANİK MELEZ POLİMERİK MALZEMELERİN TASARIMI, SENTEZİ VE TEKNOLOJİK UYGULAMALARI, 2013 - 2013  
ÖNAL A. M., OĞUZTÜRK H. E., Project Supported by Higher Education Institutions, HETEROSİKLİK VERİCİ-ALICI-VERİCİ TİPİ KARBAZOL TÜREVİ SENTEZİ, 2013 - 2013  
TOFFOLI D., ÖNAL A. M., ESENTÜRK O., DANIŞMAN M. F., HACALOĞLU J., Project Supported by Higher Education Institutions, EGZOST GAZLARINDA BULUNAN NO<sub>x</sub> MOLEKÜLLERİNİN İNDİRGEME/DEPOLAMA DÖNGÜSÜNDE KULLANILAN KATALİZÖRLERİNİN VERİMLERİNİN ARTIRILMASI, 2013 - 2013  
ÖNAL A. M., Project Supported by Higher Education Institutions, Donor-Akseptör Niteliği Taşıyan Düşük Bant Aralıklı Yeni Polifloren Kopolimer Türevlerinin Sentezi, 2009 - 2009

## **Memberships / Tasks in Scientific Organizations**

International Society of Electrochemistry, Member, 2015 - Continues

## **Scientific Refereeing**

POLYMER, SCI Journal, April 2019

ADVANCED OPTICAL MATERIALS, SCI Journal, January 2019

TUBITAK Project, 1005 - National New Ideas and Products Research Support Program, Orta Doğu Teknik Üniversitesi, Turkey, December 2018

TUBITAK Project, 1002 - Quick Support Program, Orta Doğu Teknik Üniversitesi, Turkey, November 2018

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VACUUM, SCI Journal, October 2018

PHYSICAL CHEMISTRY CHEMICAL PHYSICS, SCI Journal, April 2018

EUROPEAN POLYMER JOURNAL, SCI Journal, April 2018

PHYSICAL CHEMISTRY CHEMICAL PHYSICS, SCI Journal, January 2018

JOURNAL OF ELECTROANALYTICAL CHEMISTRY, SCI Journal, January 2018

## **Metrics**

Publication: 124

Citation (WoS): 1623

Citation (Scopus): 1552

H-Index (WoS): 22

H-Index (Scopus): 23

## **Congress and Symposium Activities**

The 69th Annual Meeting of the International Society of Electrochemistry, Working Group, Bologna, Italy, 2018

The 69th Annual Meeting of the International Society of Electrochemistry, Working Group, Bologna, Italy, 2018

VII. Ulusal Polimer Bilim ve Teknoloji Kongresi, Working Group, Eskişehir, Turkey, 2018

VII. Ulusal Polimer Bilim ve Teknoloji Kongresi, Working Group, Eskişehir, Turkey, 2018

## **Non Academic Experience**

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