

Prof. Meral AYDIN

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Education Information

Doctorate, Yildiz Technical University, Graduate School Of Natural And Applied Sciences, Kimya, Turkey 1993 - 2001

Postgraduate, Yildiz Technical University, Graduate School Of Natural And Applied Sciences, Kimya Mühendisliği, Turkey 1990 - 1992

Undergraduate, Yildiz Technical University, Mühendislik Fakültesi, Kimya Mühendisliği, Turkey 1985 - 1990

Dissertations

Doctorate, Değişik Yapıdaki İzosiyanat Aktivatörleri ile Naylon-6 Döküm Polimerlerinin Hazırlanması ve Mekanik Özelliklerinin Belirlenmesi, Yıldız Teknik Üniversitesi, Graduate School of Natural and Applied Sciences, Kimya, 2001

Postgraduate, Toluen-2,4-Diizosiyanat ile Dihidroperoksi ve Dioller arasındaki Reaksiyonların ve Kinetiklerinin İncelenmesi, Yıldız Teknik Üniversitesi, Graduate School of Natural and Applied Sciences, Kimya Mühendisliği, 1992

Research Areas

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

Academic Titles / Tasks

Professor, Yildiz Technical University, Faculty Of Arts & Science, Department Of Chemistry, 2017 - Continues

Academic and Administrative Experience

Courses

Endüstriyel polimerler ve uygulamalar, Undergraduate, 2021 - 2022

Uzmanlık alan dersi, Postgraduate, 2021 - 2022

Physical Chemistry 1, Undergraduate, 2021 - 2022, 2018 - 2019

Uzmanlık Alan Dersi (YL), Postgraduate, 2020 - 2021

Endüstriyel Polimerler ve Uygulamaları, Undergraduate, 2020 - 2021

YL Tezi, Postgraduate, 2020 - 2021

Genel Kimya, Undergraduate, 2020 - 2021

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Photochemical synthesis of bimetallic gold/silver nanoparticles in polymer matrix with tunable absorption properties: Superior photocatalytic activity for degradation of methylene blue**
Kazancioglu E., AYDIN M., ARSU N.
MATERIALS CHEMISTRY AND PHYSICS, vol.269, 2021 (SCI-Expanded)
- II. **Photochemical synthesis of nanocomposite thin films containing silver and gold nanoparticles with 2-thioxanthone thioacetic acid-dioxide and their role in photocatalytic degradation of methylene blue**
Kazancioglu E. O., AYDIN M., ARSU N.
SURFACES AND INTERFACES, vol.22, 2021 (SCI-Expanded)
- III. **"Mono" and "bifunctional" aromatic esterificated benzophenone photoinitiators for free radical polymerization**
AYDIN M., Temel G., Balta D., ARSU N.
POLYMER BULLETIN, vol.72, no.2, pp.309-322, 2015 (SCI-Expanded)
- IV. **Preparation of nanocoatings in the presence of precipitated CaCO₃ fillers by UV-curing**
Izgin O., AYDIN M., ARSU N.
PROGRESS IN ORGANIC COATINGS, vol.76, no.6, pp.950-954, 2013 (SCI-Expanded)
- V. **Panchromatic Type II Photoinitiator for Free Radical Polymerization Based on Thioxanthone Derivative**
Tar H., Esen D. S., AYDIN M., Ley C., ARSU N., Allonas X.
MACROMOLECULES, vol.46, no.9, pp.3266-3272, 2013 (SCI-Expanded)
- VI. **Photopolymerization and photophysical properties of amine linked benzophenone photoinitiator for free radical polymerization**
Temel G., Enginol B., AYDIN M., Balta D., ARSU N.
JOURNAL OF PHOTOCHEMISTRY AND PHOTOBIOLOGY A-CHEMISTRY, vol.219, no.1, pp.26-31, 2011 (SCI-Expanded)
- VII. **Thioxanthone based water-soluble photoinitiators for acrylamide photopolymerization**
Balta D., Temel G., AYDIN M., ARSU N.
EUROPEAN POLYMER JOURNAL, vol.46, no.6, pp.1374-1379, 2010 (SCI-Expanded)
- VIII. **Preparation of hydrogels by photopolymerization of acrylates in the presence of Type I and one-component Type II photoinitiators**
Karaca N., Temel G., Balta D., AYDIN M., ARSU N.
JOURNAL OF PHOTOCHEMISTRY AND PHOTOBIOLOGY A-CHEMISTRY, vol.209, no.1, pp.1-6, 2010 (SCI-Expanded)
- IX. **Determination of photoinitiated polymerization of multifunctional acrylates with acetic acid derivatives of thioxanthone by RT-FTIR**
KARASU F., AYDIN M., KAYA M. A., BALTA D., ARSU N.
PROGRESS IN ORGANIC COATINGS, vol.64, no.1, pp.1-4, 2009 (SCI-Expanded)
- X. **Study of the Polymerization of Methyl Methacrylate Initiated by Thioxanthone Derivatives: A Magnetic Field Effect**
KESKIN S., AYDIN M., KHUDYAKOV I., ARSU N.
TURKISH JOURNAL OF CHEMISTRY, vol.33, no.2, pp.201-207, 2009 (SCI-Expanded)
- XI. **The effect of the amine structure on photoinitiated free radical polymerization of methyl methacrylate using bisketocoumarin dye**
BALTA D., KARASU F., Aydin M., Arsu N.
PROGRESS IN ORGANIC COATINGS, vol.59, no.4, pp.274-277, 2007 (SCI-Expanded)
- XII. **Photoinitiated free radical polymerization of methylmethacrylate by using of quinoxalines in the presence of aldehydes**

- Aydin M., Arsu N.
PROGRESS IN ORGANIC COATINGS, vol.56, no.4, pp.338-342, 2006 (SCI-Expanded)
- XIII. **Mechanistic study of photoinitiated free radical polymerization using thioxanthone thioacetic acid as one-component type II photoinitiator**
Aydin M., ARSU N., YAGCI Y., JOCKUSCH S., TURRO N.
MACROMOLECULES, vol.38, no.10, pp.4133-4138, 2005 (SCI-Expanded)
- XIV. **A small-molecule organic semiconductor**
YAKUPHANOGLU F., AYDIN M., Arsu N., SEKERCI M.
SEMICONDUCTORS, vol.38, no.4, pp.468-471, 2004 (SCI-Expanded)
- XV. **One-component bimolecular photoinitiating systems, 2 - Thioxanthone acetic acid derivatives as photoinitiators for free radical polymerization**
AYDIN M., Arsu N., YAGCI Y.
MACROMOLECULAR RAPID COMMUNICATIONS, vol.24, no.12, pp.718-723, 2003 (SCI-Expanded)
- XVI. **Photoinitiated polymerization of methyl methacrylate by phenacyl type salts**
KASAPOGLU F., AYDIN M., Arsu N., YAGCI Y.
JOURNAL OF PHOTOCHEMISTRY AND PHOTOBIOLOGY A-CHEMISTRY, vol.159, no.2, pp.151-159, 2003 (SCI-Expanded)
- XVII. **erythro-2-Morpholino-1,2-diphenylethanol**
KARADAYI N., KAZAK C., OZTURK S., AYDIN M., Arsu N., FUN H., BUYUKGUNGOR O.
ACTA CRYSTALLOGRAPHICA SECTION E-STRUCTURE REPORTS ONLINE, vol.58, 2002 (SCI-Expanded)
- XVIII. **The effect of a cationic salt on the photoinitiated polymerization of methyl methacrylate**
Arsu N., AYDIN M.
JOURNAL OF PHOTOCHEMISTRY AND PHOTOBIOLOGY A-CHEMISTRY, vol.127, pp.143-145, 1999 (SCI-Expanded)
- XIX. **Photoinduced free radical polymerization initiated with quinoxalines**
Arsu N., Aydin M.
ANGEWANDTE MAKROMOLEKULARE CHEMIE, vol.270, pp.1-4, 1999 (SCI-Expanded)
- XX. **The effect of amines on the polymerization of methyl methacrylate**
Arsu N., Aydin M.
ANGEWANDTE MAKROMOLEKULARE CHEMIE, vol.266, pp.70-74, 1999 (SCI-Expanded)

Books & Book Chapters

- I. **The effect of photoinitiator content and UV intensity on the rate of diacrylate polymerization; A photo-DSC study**
Doğruyol Z., Karasu F., Temel İ. G., Karaca Balta D., Aydın M., Doğruyol S., Pekcan M. Ö., Arsu N.
in: Basics and Applications of Photopolymerization Reactions, J.P. Fouassier, X. Allonas, Editor, Research Signpost, Thiruvananthapuram, pp.161-173, 2010
- II. **Preparation of Hydrogels by Photoinitiated Polymerization of Acrylates: in the presence of novel initiators**
Karaca N., Temel İ. G., Karaca Balta D., Aydın M., Arsu N.
in: Basics and Applications of Photopolymerization Reactions, J.P. Fouassier, X. Allonas, Editor, Research Signpost, Thiruvananthapuram, pp.33-46, 2010
- III. **One component thioxanthone based Type II photoinitiators**
Arsu N., Aydın M., Yağcı Y., Jockusch S., Turro N. J.
in: Photochemistry and UV Curing: New Trends, J. P. Fouassier, Editor, Research Signpost, Thiruvananthapuram, pp.17-29, 2006

Refereed Congress / Symposium Publications in Proceedings

- I. **Synthesis of a Novel Visible Light Photoinitiator and Investigation of Photoinitiation Efficiency**
Buyukdurmus S., Batibay G. S., Özçelik Kazancıoğlu E., Aydın M., Arsu N.
paintistanbul & Turkcoat 2021 Virtual Congress on Organic Coatings, Polymers and Related Materials, 8 - 09 December 2021, pp.51
- II. **A facile method for in situ preparation of polymer nanocomposites containing metal, metal oxide and POSS nanoparticles**
Özçelik Kazancıoğlu E., Batibay G. S., Mutlu S., Metin E., Dizman H. M., Aydın M., Kirtay H., Arsu N.
paintistanbul & Turkcoat 2021 Virtual Congress on Organic Coatings, Polymers and Related Materials, 8 - 09 December 2021, pp.16
- III. **Photochemical Synthesis and Potential Applications of Nanomaterials and Nanocomposites**
Özçelik Kazancıoğlu E., Batibay G. S., Mutlu S., Metin E., Dizman H. M., Aydın M., Kirtay H., Arsu N.
Virtual European Symposium of Photopolymer Sciences (ESPS 2021), 15 - 17 June 2021, pp.0-1
- IV. **Photochemical Synthesis of Silver and Gold Nanoparticles with 2-Thioxanthone Thioacetic Acid Dioxide**
ÖZÇELİK E., AYDIN M., ARSU N.
Italian-Nordic Polymer Future Workshop, 14 - 15 September 2017
- V. **'The Synthesis of 2[(ethylamino)methyl]-9H-Thioxanthen-9-One Photoinitiator and Investigation of Efficiency of Photoinitiator in The Photopolymerization'**
Aydın M., Arsu N.
3rd International Turkic World Conference on Chemical Science and Technologies (ITWCCST 2017), Baku, Azerbaijan, 10 - 13 September 2017
- VI. **Acetic Acid Derivative of Thioxanthone Dioxide**
Arsu N., Aydın M., Tuğla A., Özçelik E.
4th European Symposium of Photopolymer Science, Leipzig, Germany, 11 - 14 September 2016
- VII. **Studies of the Binding Mode Acetic Acid Derivative of Thioxanthone – Thioacetic Acid – Dioxide with Calf Thymus DNA by Spectroscopic Methods**
Tuğla A., Özçelik E., Atacı N., Aydın M., Arsu N.
4th European Symposium of Photopolymer Science (ESPS), Leipzig, Germany, 11 September 2016, pp.35
- VIII. **Thioacetic Acid Derivative of Thioxanthone – Dioxide**
Özçelik E., Tuğla A., Aydın M., Arsu N.
4th European Symposium of Photopolymer Science (ESPS), Leipzig, Germany, 11 September 2016, pp.2
- IX. **Poss Nanoparçacığı İçeren Kaplamaların Hazırlanması Ve Mekanik Özelliklerinin İncelenmesi**
Kılıç D., Karaca Balta D., Aydın M.
12.Ulusal Kimya Mühendisleri Kongresi, İzmir, Turkey, 23 - 26 August 2016
- X. **Synthesis and Photophysical Properties of A New Lucanthon Derivative**
Aydın M., Arsu N.
IUPAC International Symposium on Ionic Polymerization, Bordeaux, France, 5 - 10 July 2015, pp.118
- XI. **Yeni Bir Fotobaşlatıcı Olarak 2-(3-okzobutil)-9H-tiyokzanten-9-on (TX-BA)' un Sentezi, Karakterizasyonu ve Fotopolimerizasyondaki Etkinliğinin İncelenmesi**
Türk B., Karaca Balta D., Aydın M., Arsu N.
24. Ulusal Kimya Kongresi , Zonguldak, Turkey, 29 June - 02 July 2010
- XII. **The Synthesis of 9- Oxo-9H-Thioxanthen-2-Ylamino-Acetic Acid Photoinitiator and Investigation of Efficiency of Photoinitiator in the Photopolymerization**
Aydın M., Arsu N.
8th Austrian Polymer Meeting, Linz, Austria, 20 - 22 September 2006, pp.27
- XIII. **Investigation of Kinetics of Polymerization of Mono and Multifunctional Acrylates Initiated by Thioxanthone Based Phenoxyacetic Acid Derivatives**
Karasu F., Aydın M., Doğruyol S., Arsu N.
9th Eurasia Conference on Chemical Sciences, Antalya, Turkey, 9 - 13 September 2006, pp.222
- XIV. **Free Radical Polymerization of β -Cyclodextrin Complexes of Methyl Methacrylate in the Presence of Novel Water Soluble Thioxanthone Based Photoinitiators**

Karaca Balta D., Aydın M., Doğruyol S., Arsu N.

9th Eurasia Conference on Chemical Sciences, Antalya, Turkey, 9 - 13 September 2006, pp.225

- XV. **Investigation of Kinetics of Polymerization of Different Type of Acrylates Initiated by of 9-Oxo-9H-Thioxanthan-2-Ylamino-Acetic Acid**
Aydın M., Karasu F., Karaca Balta D., Arsu N.
9th Eurasia Conference on Chemical Sciences , Antalya, Turkey, 9 - 13 September 2006, pp.224
- XVI. **Free Radical Polymerization of β -Cyclodextrin Complexes of Methyl Methacrylate in the Presence of Novel Water Soluble Thioxanthone Based Photoinitiators**
Karaca Balta D., Aydın M., Doğruyol S., Arsu N.
9th Eurasia Conference on Chemical Sciences , Antalya, Turkey, 9 - 13 September 2006, pp.225
- XVII. **The Investigation of Photophysical Properties and Photokinetics of Novel Thioxanthone Based Photoinitiators**
Karaca Balta D., Karasu F., Aydın M., Arsu N.
6th International Paint, Varnish, Ink & Auxiliary Products IndustryCongress& Exhibition Presentations, İstanbul, Turkey, 17 - 19 May 2006, pp.62-68
- XVIII. **The Water Soluble Polymerization Initiators Based on The Thioxanthone Derivatives**
Torlak O., Koçdemir M., Karaca Balta D., Aydın M., Arsu N.
XIX. Ulusal Kimya Kongresi , İzmir, Turkey, 30 September - 04 October 2005, pp.873
- XIX. **The Synthesis of Water Soluble Initiators Based on The Thioxanthone Acetic Acid Derivatives and Their Use For The Polymerizations of Acrylamide**
Karaca Balta D., Aydın M., Arsu N.
APME-6 International Symposium on Advanced Polymers via Macromolecular Engineering, İstanbul, Turkey, 15 - 18 August 2005, pp.100
- XX. **Using of Thioxanthone-Tioaceticacid and Thioxanthone-Phenoxyaceticacid as Photoinitiator in Various UV-Curable Formulations**
Karasu F., Aydın M., Kaya M. A., Arsu N., Yağcı Y.
ICFA(International Conference on Functional Acrylates, İstanbul, Turkey, 31 August - 04 September 2004, pp.30
- XXI. **UV-Curable Adhesives**
Aydın M., Arsu N.
ICFA (International Conference on Functional Acrylates), İstanbul, Turkey, 31 August - 04 September 2004, pp.36
- XXII. **Synthesis of Novel Thioxanthone Based Photoinitiators and Their Role in Photopolymerization**
Aydın M., Karaca Balta D., Arsu N., Yağcı Y.
ICFA (International Conference on Functional Acrylates), İstanbul, Turkey, 31 August - 04 September 2004, pp.30
- XXIII. **Fotobaşlatılmış Serbest Radikal Polimerizasyonunda Fotobaşlatıcı ve Manyetik Alan Etkisinin İncelenmesi**
Doğruyol S., Aydın M., Arsu N.
XVIII. Ulusal Kimya Kongresi, Kars, Turkey, 5 - 09 July 2004, pp.1164
- XXIV. **Tiyozanton Türevlerinin Varlığında Metilmetakrilatın Fotobaşlatılmış Serbest Radikal Polimerizasyonunun Manyetik Alan Etkisi Altında İncelenmesi**
Doğruyol S., Aydın M., Arsu N.
XVII. Ulusal Kimya Kongresi, İstanbul, Turkey, 8 - 11 September 2003, pp.708
- XXV. **The Synthesis of Amine Linked Thioxanthenes and Using of Them as Photoinitiator In UV-Curing Applications**
Aydın M., Arsu N.
39th IUPAC Congress, Ottawa, Canada, 10 - 15 August 2003, pp.176
- XXVI. **Bisdietilaminokumarinin Aminler Varlığındaki Fotobaşlatılmış Polimerizasyonu**
Karaca Balta D., Karasu F., Aydın M., Arsu N.
XVI. Ulusal Kimya Kongresi , Konya, Turkey, 10 - 13 September 2002, pp.873

Supported Projects

- ARSU N., Batıbay G. S., AYDIN M., Project Supported by Higher Education Institutions, Radar Absorplayıcı Nanokompozit Malzemelerin Fotokimyasal Yöntemle Hazırlanması ve Karakterizasyonu, 2022 - Continues
- AYDIN M., ARSU N., Güler N., Project Supported by Higher Education Institutions, Fotoaktif Sinnamik Asit İçeren Polimerlerin Kendi Kendini Onarım Mekanizmasının İncelenmesi, 2022 - Continues
- KOCAOBA S., ARSU N., AYDIN M., Kırtay H., Öztürk M., Project Supported by Higher Education Institutions, Çözültide ve polimer matrikste insitu fotokimyasal işlemle hazırlanan metal nano parçacıkların bazı ağır metallerin adsorpsiyonunun incelenmesi, 2018 - 2021
- AYDIN M., Project Supported by Higher Education Institutions, Nanokaplamalar, 2012 - 2015
- Aydın M., Arsu N., Doğruyol S., Öcal N., Sevinç Esen D., Karaca N., Project Supported by Higher Education Institutions, Tiyokzanton Bazlı Suda Çözünür Makrofotobaşlatıcı Sentezi ve Fotobaşlatılmış Polimerizasyon Yöntemi İle Makrofotobaşlatıcı Beraberinde Hidrojellerin Hazırlanması, 2010 - 2013
- Aydın M., Karaca Balta D., Temel İ. G., Project Supported by Higher Education Institutions, Fotobaşlatıcı Sentezi ve Fotofiziksel ve Fotokimyasal Özelliklerinin İncelenmesi, 2008 - 2011
- AYDIN M., KARACA BALTA D., DOĞRUYOL S., YÜKSELİCİ M. H., CB Strateji ve Bütçe Başkanlığı (Kalkınma Bakanlığı) Projesi, Fotokırıcı polimerlerde holografik bilgi depolama teknolojisini geliştirilmesi, 2006 - 2010
- AYDIN M., Project Supported by Higher Education Institutions, Benzofenon türevlerinin sentezi ve fotopolimerizasyonunun incelenmesi, 2004 - 2007
- Arsu N., Aydın M., Karaca Balta D., Doğruyol S., Karasu F., CB Strateji ve Bütçe Başkanlığı (Kalkınma Bakanlığı) Projesi, Polimer Işık Lifi Üretimi Teknolojisinin Geliştirilmesi, 2004 - 2007
- Arsu N., Aydın M., Doğruyol S., TÜBİTAK Project, Çeşitli Fotobaşlatıcılar ve Aminoalkoller Beraberinde Hazırlanan Polimer Filmlerinin Yüzey Kaplama Özelliklerinin İncelenmesi, 1999 - 2005
- Arsu N., Aydın M., Doğruyol S., Industrial Thesis Project, UV Kürleştirilmiş Polimer Filmlerinin Yüzey Kaplama Özelliklerinin İncelenmesi, 2000 - 2003
- Arsu N., Aydın M., Project Supported by Higher Education Institutions, Serbest Radikal Polimerizasyonunda Aminlerin II.Tip Fotobaşlatıcılar Beraberinde Oksijenin Polimerizasyon Üzerine Olan Olumsuz Etkisini Gidermek Amacı ile Kullanımı, 1995 - 1998
- Aydın M., Yıldırım H., Project Supported by Higher Education Institutions, Değişik Yapıdaki İzosiyanat Aktivatörleri ile Naylon-6 Döküm Polimerlerinin Hazırlanması ve Mekanik Özelliklerinin Belirlenmesi, 1991 - 1993

Metrics

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