

Personal Information

Office Phone: [+90 210](tel:+90210) Extension: 3238

Email: erolyil@metu.edu.tr

Web: <https://avesis.metu.edu.tr/erolyil>

Post Address: ODU Kimya Bolumu, Üniversiteler, ODTÜ MM, 06800 Çankaya/Ankara

Education Information

Doctorate, Istanbul Technical University, Fen Bilimleri Enstitüsü, Chemistry, Turkey 2005 - 2012

Post Graduate, Istanbul Technical University, Fen Bilimleri Enstitüsü, Chemistry Program, Turkey 2004 - 2005

Under Graduate, Ihsan Dogramaci Bilkent University, Faculty Of Science, Chemistry, Turkey 1998 - 2003

Foreign Languages

English, C2 Proficiency

Certificates, Courses and Trainings

Other, Reviewer Methods and Ethics Certificate, ACS Publications, 2018

Dissertations

Doctorate, Molecular Dynamics Simulation Studies on the Physical Properties of Polyethylene-Organoclay Nanocomposite Materials, Istanbul Technical University, Fen Bilimleri Enstitüsü, Chemistry, 2012

Post Graduate, ACCURATE DETERMINATION OF THE POTENTIAL ENERGY SURFACES AND THE MOLECULAR PROPERTIES FOR MHe⁺ (M=Li, Na, K) COMPLEXES USING QUANTUM MECHANICAL TECHNIQUES, Istanbul Technical University, INSTITUTE OF SCIENCE AND TECHNOLOGY, 2005

Research Areas

Chemistry

Academic Titles / Tasks

Assistant Professor, Middle East Technical University, Faculty Of Arts And Sciences, Department Of Chemistry, 2019 - Continues

Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- **Effect of substituents in sulfoxides on the enhancement of thermoelectric properties of PEDOT:PSS: experimental and modelling evidence**
Zhu Q., Yildirim E., Wang X., Kyaw A. K. K. , Tang T., Soo X. Y. D. , Wong Z. M. , Wu G., Yang S., Xu J.
MOLECULAR SYSTEMS DESIGN & ENGINEERING, vol.5, pp.976-984, 2020 (Journal Indexed in SCI)
- **The Role of Electrostatic Interaction between Free Charge Carriers and Counterions in Thermoelectric Power Factor of Conducting Polymers: From Crystalline to Polycrystalline Domains**

- Shi W., Yildirim E., Wu G., Wong Z. M., Deng T., Wang J., Xu J., Yang S.
ADVANCED THEORY AND SIMULATIONS, 2020 (Journal Indexed in SCI)
- **Correlating charge and thermoelectric transport to paracrystallinity in conducting polymers.**
Abutaha A., Kumar P., Yildirim E., Shi W., Yang S., Wu G., Hippalgaonkar K.
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 - **The impact of [1,2,5]chalcogenazolo[3,4-f]-benzo[1,2,3]triazole structure on the optoelectronic properties of conjugated polymers**
Alkan E. A., GÖKER S., Sarigul H., YILDIRIM E., Udum Y. A., Toppare L.
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 - **Physical Characterization of Inclusion Complexes of Triphenyl Phosphate and Cyclodextrins in Solution.**
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The journal of physical chemistry. B, vol.124, pp.404-412, 2020 (Journal Indexed in SCI)
 - **Improved Alignment of PEDOT:PSS Induced by γ -in-situ γ Crystallization of "Green" Dimethylsulfone Molecules to Enhance the Polymer Thermoelectric Performance.**
Zhu Q., Yildirim E., Wang X., Soo X., Zheng Y., Tan T., Wu G., Yang S., Xu J.
Frontiers in chemistry, vol.7, pp.783, 2019 (Journal Indexed in SCI)
 - **Proquinoidal-Conjugated Polymer as an Effective Strategy for the Enhancement of Electrical Conductivity and Thermoelectric Properties**
Tam T. L. D., Ng C. K., Lim S. L., Yildirim E., Ko J., Leong W. L., Yang S., Xu J.
CHEMISTRY OF MATERIALS, vol.31, pp.8543-8550, 2019 (Journal Indexed in SCI)
 - **Theoretical design of high-mobility bithiophene imide (BTI) derivative polymeric semiconductors**
Sutay B., Onaran G., Yildirim E., Yurtsever M.
COMPUTATIONAL MATERIALS SCIENCE, vol.166, pp.162-169, 2019 (Journal Indexed in SCI)
 - **Influence of UV stabilizers on the weathering of PETG and PCTT films**
Arangdad K., Yildirim E., Detwiler A., Cleven C. D., Burk C., Shamey R., Pasquinelli M. A., Freeman H. S., El-Shafei A.
JOURNAL OF APPLIED POLYMER SCIENCE, vol.136, 2019 (Journal Indexed in SCI)
 - **Role of Local Polymer Conformations on the Diverging Glass Transition Temperatures and Dynamic Fragilities of Isotactic-, Syndiotactic-, and Atactic-Poly(methyl methacrylate)s**
Shen J., Yildirim E., Li S., Caydamli Y., Pasquinelli M. A., Tonelli A. E.
MACROMOLECULES, vol.52, pp.3897-3908, 2019 (Journal Indexed in SCI)
 - **Self-Organization of PEDOT:PSS Induced by Green and Water-Soluble Organic Molecules**
Yildirim E., Zhu Q., Wu G., Tan T. L., Xu J., Yang S.
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 - **An experimental and computational approach to pH-dependent self-aggregation of poly(2-isopropyl-2-oxazoline)**
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 - **Polymer morphology and interfacial charge transfer dominate over energy-dependent scattering in organic-inorganic thermoelectrics**
Kumar P., Zaia E. W., Yildirim E., Repaka D. V. M., Yang S., Urban J. J., Hippalgaonkar K.
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 - **CoFe₂O₄ Nanocrystals Mediated Crystallization Strategy for Magnetic Functioned ZSM-5 Catalysts**
Li B., Yildirim E., Li W., Qi D., Yu J., Wei J., Liu Z., Sun Z., Liu Y., Kong B., et al.
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 - **A theoretical mechanistic study on electrical conductivity enhancement of DMSO treated PEDOT:PSS**
Yildirim E., Wu G., Yong X., Tan T. L., Zhu Q., Xu J., Ouyang J., Wang J., Yang S.
JOURNAL OF MATERIALS CHEMISTRY C, vol.6, pp.5122-5131, 2018 (Journal Indexed in SCI)
 - **Experimental and MD simulation study on the physical and mechanical properties of organically modified montmorillonite clay and compatibilized linear low density polyethylene nanocomposites**
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- Nanoscale considerations responsible for diverse macroscopic phase behavior in monosubstituted isobutyl-POSS/poly(ethylene oxide) blends**
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- A comparative study of the influence of N, N'-dialkyl vs. N, N'-diaryl-based electron donor ancillary ligands on photocurrent and photovoltage in dye-sensitized solar cells (DSSCs)**
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- Synthetic Design of Polyester Electrolytes Guided by Hydrophobicity Calculations**
 Yildirim E., Dakshinamoorthy D., Peretic M. J. , Pasquinelli M. A. , Mathers R. T.
 MACROMOLECULES, vol.49, pp.7868-7876, 2016 (Journal Indexed in SCI)
- Effect of intersegmental interactions on the morphology of segmented polyurethanes with mixed soft segments: A coarse-grained simulation study**
 Yildirim E., Yurtsever M., Wilkes G. L. , Yilgor I.
 POLYMER, vol.90, pp.204-214, 2016 (Journal Indexed in SCI)
- Hierarchical multi-component nanofiber separators for lithium polysulfide capture in lithium-sulfur batteries: an experimental and molecular modeling study**
 Zhu J., Yildirim E., Aly K., Shen J., Chen C., Lu Y., Jiang M., Kim D., Tonelli A. E. , Pasquinelli M. A. , et al.
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- Thermal Transitions in Polyelectrolyte Assemblies Occur via a Dehydration Mechanism**
 Yildirim E., Zhang Y., Lutkenhaus J. L. , Sammalkorpi M.
 ACS MACRO LETTERS, vol.4, pp.1017-1021, 2015 (Journal Indexed in SCI)
- The influence of ionic strength and mixing ratio on the colloidal stability of PDAC/PSS polyelectrolyte complexes**
 Zhang Y., Yildirim E., Antila H. S. , Valenzuela L. D. , Sammalkorpi M., Lutkenhaus J. L.
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- Understanding the influence of hydrogen bonding and diisocyanate symmetry on the morphology and properties of segmented polyurethanes and polyureas: Computational and experimental study**
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- The role of diisocyanate and soft segment on the intersegmental interactions in urethane and urea based segmented copolymers: A DFT study**
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- Theoretical approach to the structural, electronic, and morphological properties of poly(E >- caprolactone) grafted polypyrroles**
 Yildirim E., Erciyas G., Yurtsever M.
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- MORPHOLOGICAL PROPERTIES OF PYRROLE AND PHENYLENE ROD-COIL DIBLOCK COPOLYMERS BY DISSIPATIVE PARTICLE DYNAMICS**
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 Salmas R. E. , Demir B., Yildirim E., Sirkecioğlu A., Yurtsever M., Ahunbay M. G.
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- Multiscale Modeling of the Morphology and Properties of Segmented Silicone-Urea Copolymers**
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- **A comparative study on the efficiencies of polyethylene compatibilizers by using theoretical methods**
Yildirim E., Yurtsever M.
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- **Microphase Separation of Phenylene Oligomers with Polymeric Side Chains: A Dissipative Particle Dynamics Study**
Yildirim E., Yurtsever M., Kenarli B., Demirel A. L.
MACROMOLECULAR THEORY AND SIMULATIONS, vol.20, pp.340-349, 2011 (Journal Indexed in SCI)
- **A QSPR Study on the Physical Properties of Substituted Polypyrroles and Poly(paraphenylenes)**
Yildirim E., Aksoy D., Tuzun N. S. , Yurtsever M.
DESIGNED MONOMERS AND POLYMERS, vol.14, pp.79-93, 2011 (Journal Indexed in SCI)
- **Bosonic helium clusters doped by alkali metal cations: interaction forces and analysis of their most stable structures**
Marinetti F., Coccia E., Bodo E., Gianturco F. A. , Yurtsever E., Yurtsever M., Yildirim E.
THEORETICAL CHEMISTRY ACCOUNTS, vol.118, pp.53-65, 2007 (Journal Indexed in SCI)
- **Solvation of K⁺ in helium droplets**
Yurtsever E., Yildirim E., Yurtsever M., Bodo E., Gianturco F. A.
EUROPEAN PHYSICAL JOURNAL D, vol.43, pp.105-108, 2007 (Journal Indexed in SCI)
- **Bosonic helium droplets with cationic impurities: Onset of electrostriction and snowball effects from quantum calculations**
Coccia E., Bodo E., Marinetti F., Gianturco F. A. , Yildirim E., Yurtsever M., Yurtsever E.
JOURNAL OF CHEMICAL PHYSICS, vol.126, 2007 (Journal Indexed in SCI)

Articles Published in Other Journals

- **Improved Eco-Friendliness of a Common Flame Retardant through Inclusion Complexation with Cyclodextrins**
Zhang N., Yildirim E., Zane C. P. , Shen J., Vinueza N., Hinks D., Tonelli A. E. , Pasquinelli M. A.
ACS APPLIED POLYMER MATERIALS, vol.1, pp.2768-2777, 2019 (Journal Indexed in ESCI)

Citations

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