

## Assoc. Prof. NAZAR İLERİ ERCAN

### Personal Information

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### International Researcher IDs

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Publons / Web Of Science ResearcherID: AAB-7990-2019

ScopusID: 8938020000

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### Education Information

Doctorate, United States Of America 2005 - 2010

Postgraduate, Middle East Technical University, Graduate School of Natural and Applied Sciences, Turkey 2003 - 2005

Undergraduate, Middle East Technical University, Faculty of Engineering, Department of Chemical Engineering, Turkey 1998 - 2003

### Research Areas

Pharmaceutics Technology, Chemical Engineering and Technology, Life Sciences

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

- I. **Phytochemicals in Pancreatic Cancer Treatment: A Machine Learning Study**  
Genc D. E., Ozbek O., Oral B., Yildirim R., İLERİ ERCAN N.  
ACS Omega, vol.9, no.1, pp.413-421, 2024 (SCI-Expanded)
- II. **Coarse-grained modeling of polystyrene-modified CNTs and their interactions with lipid bilayers**  
Gul G., Faller R., İLERİ ERCAN N.  
BIOPHYSICAL JOURNAL, vol.122, no.10, pp.1748-1761, 2023 (SCI-Expanded)
- III. **Polystyrene-modified carbon nanotubes: Promising carriers in targeted drug delivery**  
Gul G., Faller R., İLERİ ERCAN N.  
Biophysical Journal, vol.121, no.22, pp.4271-4279, 2022 (SCI-Expanded)
- IV. **The Toxicity of Polystyrene-Based Nanoparticles in *Saccharomyces cerevisiae* Is Associated with Nanoparticle Charge and Uptake Mechanism**  
Ozbek O., O. Ulgen K., İLERİ ERCAN N.  
Chemical Research in Toxicology, vol.34, no.4, pp.1055-1068, 2021 (SCI-Expanded)
- V. **Cytotoxicity analysis of nanoparticles by association rule mining**  
Gul G., Yildirim R., İLERİ ERCAN N.  
Environmental Science: Nano, vol.8, no.4, pp.937-949, 2021 (SCI-Expanded)
- VI. **Fullerene translocation through peroxidized lipid membranes**  
Gul G., İLERİ ERCAN N.

RSC Advances, vol.11, no.13, pp.7575-7586, 2021 (SCI-Expanded)

- VII. **Pore length- and ion concentration-dependent ionic current in cylindrical nanopores: an atomistic molecular dynamics study**  
İLERİ ERCAN N.  
TURKISH JOURNAL OF CHEMISTRY, vol.43, no.2, pp.520-530, 2019 (SCI-Expanded)
- VIII. **Understanding Interactions of Curcumin with Lipid Bilayers: A Coarse-Grained Molecular Dynamics Study**  
İLERİ ERCAN N.  
Journal of Chemical Information and Modeling, 2019 (SCI-Expanded)
- IX. **Molecular Dynamics Modeling of Methylene Blue-DOPC Lipid Bilayer Interactions**  
İLERİ ERCAN N., Stroeve P., Tringe J. W., Faller R.  
Langmuir, vol.34, no.14, pp.4314-4323, 2018 (SCI-Expanded)
- X. **Improved controlled release of protein from expanded-pore mesoporous silica nanoparticles modified with co-functionalized poly(n-isopropylacrylamide) and poly(ethylene glycol) (PNIPAM-PEG)**  
Yu E., Lo A., Jiang L., Petkus B., İLERİ ERCAN N., Stroeve P.  
Colloids and Surfaces B: Biointerfaces, vol.149, pp.297-300, 2017 (SCI-Expanded)
- XI. **Understanding the Interaction of Pluronic L61 and L64 with a DOPC Lipid Bilayer: An Atomistic Molecular Dynamics Study**  
İLERİ ERCAN N., Stroeve P., Tringe J. W., Faller R.  
Langmuir, vol.32, no.39, pp.10026-10033, 2016 (SCI-Expanded)
- XII. **Molecular Dynamics and Monte Carlo simulations resolve apparent diffusion rate differences for proteins confined in nanochannels**  
Tringe J., İLERİ ERCAN N., Levie H., Stroeve P., Ustach V., Faller R., Renaud P.  
Chemical Physics, vol.457, pp.19-27, 2015 (SCI-Expanded)
- XIII. **Graphene and nano-diamond synthesis in expansions of molten liquid carbon**  
İLERİ ERCAN N., Goldman N.  
Journal of Chemical Physics, vol.141, no.16, 2014 (SCI-Expanded)
- XIV. **Quantum molecular dynamics simulations of liquid benzene using orbital optimization**  
İLERİ ERCAN N., Fried L. E.  
THEORETICAL CHEMISTRY ACCOUNTS, vol.133, no.11, pp.139-149, 2014 (SCI-Expanded)
- XV. **Molecular transport of proteins through nanoporous membranes fabricated by interferometric lithography**  
İLERİ ERCAN N., Faller R., Palazoglu A., Létant S. E., Tringe J. W., Stroeve P.  
Physical Chemistry Chemical Physics, vol.15, no.3, pp.965-971, 2013 (SCI-Expanded)
- XVI. **Mesoscale simulations of biomolecular transport through nanofilters with tapered and cylindrical geometries**  
İLERİ ERCAN N., Létant S. E., Palazoglu A., Stroeve P., Tringe J. W., Faller R.  
Physical Chemistry Chemical Physics, vol.14, no.43, pp.15066-15077, 2012 (SCI-Expanded)
- XVII. **Nanopillar array on a fiber facet for highly sensitive surface-enhanced Raman scattering**  
Yang X., İLERİ ERCAN N., Larson C. C., Carlson T. C., Britten J. A., Chang A. S. P., Gu C., Bond T. C.  
Optics Express, vol.20, no.22, pp.24819-24826, 2012 (SCI-Expanded)
- XVIII. **Fabrication of functional silicon-based nanoporous membranes**  
İLERİ ERCAN N., Stroeve P., Palazoglu A., Faller R., Zaidi S. H., Nguyen H. T., Britten J. A., Letant S. E., Tringe J. W.  
JOURNAL OF MICRO-NANOLITHOGRAPHY MEMS AND MOEMS, no.1, 2012 (SCI-Expanded)
- XIX. **Biotechnical and other applications of nanoporous membranes**  
Stroeve P., İLERİ ERCAN N.  
Trends in Biotechnology, vol.29, no.6, pp.259-266, 2011 (SCI-Expanded)
- XX. **Controlled Molecular Transport through Nanofilters with Tapered and Cylindrical Pores**  
İLERİ ERCAN N., Wiederoder M., Stroeve P., Letant S., Britten J., Hoang Nguyen H. N., Larson C., Balhorn R., Shirk M., Zaidi S., et al.

BIOPHYSICAL JOURNAL, no.3, 2009 (SCI-Expanded)

- XXI. **PH influences intracellular reaction network of beta-lactamase producing *Bacillus licheniformis***  
Calik P., Ileri N.  
CHEMICAL ENGINEERING SCIENCE, vol.62, pp.5206-5211, 2007 (SCI-Expanded)
- XXII. **Phosphate enrichment and fed-batch operation for prolonged beta-lactamase production by *Bacillus licheniformis***  
Ileri N., Calik P., Sengul A.  
JOURNAL OF APPLIED MICROBIOLOGY, vol.102, no.5, pp.1418-1426, 2007 (SCI-Expanded)
- XXIII. **PH and ionic strength effects on amino acid transport through Au-nanotubule membranes charged with self-assembled monolayers**  
Ku J., Lai S., İLERİ ERCAN N., Ramírez P., Mafé S., Stroeve P.  
Journal of Physical Chemistry C, vol.111, no.7, pp.2965-2973, 2007 (SCI-Expanded)
- XXIV. **Effects of pH strategy on endo- and exo-metabolome profiles and sodium potassium hydrogen ports of beta-lactamase-producing *Bacillus licheniformis***  
Ileri N., Calik P.  
BIOTECHNOLOGY PROGRESS, vol.22, no.2, pp.411-419, 2006 (SCI-Expanded)
- XXV. **Novel antifoam for fermentation processes: Fluorocarbon-hydrocarbon hybrid unsymmetrical bolaform surfactant**  
Calik P., Ileri N., Erdinc B., Aydogan N., Argun M.  
LANGMUIR, vol.21, no.19, pp.8613-8619, 2005 (SCI-Expanded)

### Refereed Congress / Symposium Publications in Proceedings

- I. **Efficient first principles molecular dynamics of benzene using orbital optimization**  
İLERİ ERCAN N., Fried L. E.  
248th National Meeting of the American-Chemical-Society (ACS), San-Francisco, Costa Rica, 10 - 14 August 2014
- II. **Molecular Dynamics Simulations of Colloids in Single Solid-State Nanopores**  
İLERİ ERCAN N., Davenport M., Letant S. E., Tringe J. W.  
58th Annual Meeting of the Biophysical-Society, San-Francisco, Costa Rica, 15 - 19 February 2014
- III. **Detection of volatile organic compounds by surface enhanced Raman scattering**  
Chang A. S. P., Maiti A., İLERİ ERCAN N., Bora M., Larson C. C., Britten J. A., Bond T. C.  
Advanced Environmental, Chemical, and Biological Sensing Technologies IX, Baltimore, MD, United States Of America, 26 - 27 April 2012, vol.8366
- IV. **Study of Electrophoretic Mobility of Proteins in Agarose and Poly-Acrylamide Gels**  
İLERİ ERCAN N., Letant S. E., Britten J., Tringe J. W.  
56th Annual Meeting of the Biophysical-Society, California, United States Of America, 25 - 29 February 2012
- V. **Efficient nanoporous silicon membranes for integrated microfluidic separation and sensing systems**  
İLERİ ERCAN N., Létant S. E., Britten J., Nguyen H., Larson C., Zaidi S., Palazoglu A., Faller R., Tringe J. W., Stroeve P.  
2009 MRS Spring Meeting, San Francisco, CA, United States Of America, 13 - 17 April 2009, vol.1191, pp.87-92
- VI. **Effect of fed batch operation on intracellular reaction network of  $\beta$ -lactamase producing *Bacillus licheniformis***  
Calik P., Ileri N.  
13th European Congress on Biotechnology (ECB 13), Barcelona, Spain, 16 - 19 September 2007
- VII. **pH influences metabolite profiling of  $\beta$ -lactamase producing *B-licheniformis***  
Ileri N., Calik P., Sengul A.  
12th European Congress on Biotechnology (ECB 12), Copenhagen, Denmark, 21 - 24 August 2005