

Personal Information

Office Phone: [+90 +90 531 662 2396](tel:+905316622396)

Fax Phone: [+90 +90 531 662 2396](tel:+905316622396)

Email: tarikbay@metu.edu.tr

Other Email: tarikbaytekin@yahoo.de

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



International Researcher IDs

ScholarID: 686M5L4AAAAJ

ORCID: 0000-0002-2004-1702

Publons / Web Of Science ResearcherID: K-5088-2014

ScopusID: 14049930100

Yoksis Researcher ID: 226204

Education Information

Doctorate, Middle East Technical University, Graduate School of Natural and Applied Sciences, Graduate School of Natural and Applied Sciences, Turkey 1999 - 2002

Postgraduate, Middle East Technical University, Graduate School of Natural and Applied Sciences, Turkey 1995 - 1998

Undergraduate, Middle East Technical University, Faculty of Arts and Sciences, Turkey 1990 - 1995

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Fluorescence sensing of cations, anions and neutral molecules towards information processing at molecular level, Middle East Technical University, Graduate School of Natural and Applied Sciences, Chemistry, 2002

Postgraduate, Development of backscattered laser-induced spectrofluorometer and measurement of phytoplanktons in-situ, Middle East Technical University, Graduate School of Natural and Applied Sciences, Chemistry, 1998

Research Areas

Natural Sciences

Academic Titles / Tasks

Assistant Professor, Middle East Technical University, Faculty of Arts and Sciences, Department of Chemistry, 2020 - Continues

Assistant Professor, Ihsan Dogramaci Bilkent University, Nanotechnology Institute, 2014 - 2018
Researcher, Harvard University, Department of Chemistry and Chemical Biology, 2014 - 2014
Researcher, Northwestern University, Non-equilibrium Energy Research Center (NERC), 2009 - 2014
Researcher, Fraunhofer Research Institute, Golm,, 2009 - 2009
Researcher, Federal Institute for Materials Research and Testing- BAM, 2007 - 2009
Researcher, Freie Universitaet Berlin, Institute of Organic Chemistry and Biochemistry, 2005 - 2007
Researcher, Rheinische Friedrich-Wilhelms-Universitaet Bonn, Institute of Organic Chemistry and Biochemistry, 2003 - 2005
Researcher, Humboldt-Universitaet zu Berlin, Department of Chemistry, 2002 - 2003
Research Assistant, Middle East Technical University, Faculty of Arts and Sciences, Department of Chemistry, 1995 - 2002

Courses

Physical Chemistry-2, Undergraduate, 2023 - 2024
Physical Chemistry-2 Laboratory, Undergraduate, 2023 - 2024
Physical Chemistry-1, Undergraduate, 2022 - 2023
General Chemistry, Undergraduate, 2022 - 2023
Physical Chemistry-1 Laboratory, Undergraduate, 2022 - 2023

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Core-Shell Quantum Dot-Embedded Polymers for Antistatic Applications**
Ekim S. D., Aydin F., Kaya G. E., BAYTEKİN H. T., ASİL ALPTEKİN D., Baytekin B.
ACS APPLIED NANO MATERIALS, vol.6, no.24, pp.22693-22700, 2023 (SCI-Expanded)
- II. **Organic Charge Transfer Cocrystals as Additives for Dissipation of Contact Charges on Polymers**
Ekim S. D., Kaya G. E., DAŞTEMİR M., YILDIRIM E., BAYTEKİN H. T., BAYTEKİN B.
ACS APPLIED MATERIALS & INTERFACES, vol.14, no.50, pp.56018-56026, 2022 (SCI-Expanded)
- III. **Online lubricant degradation monitoring using contact charging of polymers**
Karluk A. A., Ekim S. D., BAYTEKİN B., BAYTEKİN H. T.
APPLIED SURFACE SCIENCE, vol.584, 2022 (SCI-Expanded)
- IV. **Why Does Wood Not Get Contact Charged? Lignin as an Antistatic Additive for Common Polymers**
Ozel M., Demir F., Aikebaier A., Kwiczak-Yigitbasi J., Baytekin H. T., Baytekin B.
CHEMISTRY OF MATERIALS, vol.32, no.17, pp.7438-7444, 2020 (SCI-Expanded)
- V. **Self-Regulating Plant Robots: Bioinspired Heliotropism and Nyctinasty**
Cezan S. D., Baytekin H. T., Baytekin B.
SOFT ROBOTICS, vol.7, no.4, pp.444-450, 2020 (SCI-Expanded)
- VI. **Mechanical Control of Periodic Precipitation in Stretchable Gels to Retrieve Information on Elastic Deformation and for the Complex Patterning of Matter**
Morsali M., Khan M. T. A., Ashirov R., Hollo G., Baytekin H. T., Lagzi I., Baytekin B.
ADVANCED MATERIALS, vol.32, no.10, 2020 (SCI-Expanded)
- VII. **Control of triboelectric charges on common polymers by photoexcitation of organic dyes**
Cezan S. D., Nalbant A. A., BÜYÜKTEMİZ M., DEDE Y., Baytekin H. T., Baytekin B.
NATURE COMMUNICATIONS, vol.10, 2019 (SCI-Expanded)
- VIII. **Minimizing friction, wear, and energy losses by eliminating contact charging**
Sayfidinov K., Cezan S. D., Baytekin B., Baytekin H. T.
SCIENCE ADVANCES, vol.4, no.11, 2018 (SCI-Expanded)
- IX. **Slit Tubes for Semisoft Pneumatic Actuators**
Belding L., Baytekin B., Baytekin H. T., Rothemund P., Verma M. S., Nemiroski A., Sameoto D., Grzybowski B. A., Whitesides G. M.

ADVANCED MATERIALS, vol.30, no.9, 2018 (SCI-Expanded)

- X. **Artificial Heliotropism and Nyctinasty Based on Optomechanical Feedback and No Electronics**
Baytekin B., Cezan S. D., Baytekin H. T., Grzybowski B. A.
SOFT ROBOTICS, vol.5, no.1, pp.93-98, 2018 (SCI-Expanded)
- XI. **The Charging Events in Contact-Separation Electrification**
Musa U. G., Cezan S. D., Baytekin B., Baytekin H. T.
SCIENTIFIC REPORTS, vol.8, 2018 (SCI-Expanded)
- XII. **Dependence of triboelectric charging behavior on material microstructure**
Wang A. E., Gil P. S., Holonga M., Yavuz Z., Baytekin H. T., Sankaran R. M., Lacks D. J.
PHYSICAL REVIEW MATERIALS, vol.1, no.3, 2017 (SCI-Expanded)
- XIII. **Mechanochemical Activation and Patterning of an Adhesive Surface toward Nanoparticle Deposition**
Baytekin H. T., Baytekin B., Huda S., Yavuz Z., Grzybowski B. A.
JOURNAL OF THE AMERICAN CHEMICAL SOCIETY, vol.137, no.5, pp.1726-1729, 2015 (SCI-Expanded)
- XIV. **Mechanically Driven Activation of Polyaniline into Its Conductive Form**
Baytekin B., Baytekin H. T., Grzybowski B. A.
ANGEWANDTE CHEMIE-INTERNATIONAL EDITION, vol.53, no.27, pp.6946-6950, 2014 (SCI-Expanded)
- XV. **Mechanical Control of Surface Adsorption by Nanoscale Cracking**
Zhuang Q., Warren S. C., Baytekin B., Demiroers A. F., Pillai P. P., Kowalczyk B., Baytekin H. T., Grzybowski B.
ADVANCED MATERIALS, vol.26, no.22, pp.3667-3672, 2014 (SCI-Expanded)
- XVI. **Retrieving and converting energy from polymers: deployable technologies and emerging concepts**
Baytekin B., Baytekin H. T., Grzybowski B. A.
ENERGY & ENVIRONMENTAL SCIENCE, vol.6, no.12, pp.3467-3482, 2013 (SCI-Expanded)
- XVII. **Control of Surface Charges by Radicals as a Principle of Antistatic Polymers Protecting Electronic Circuitry**
Baytekin H. T., Baytekin B., Hermans T. M., Kowalczyk B., Grzybowski B. A.
SCIENCE, vol.341, no.6152, pp.1368-1371, 2013 (SCI-Expanded)
- XVIII. **What Really Drives Chemical Reactions on Contact Charged Surfaces?**
Baytekin B., Baytekin H. T., Grzybowski B. A.
JOURNAL OF THE AMERICAN CHEMICAL SOCIETY, vol.134, no.17, pp.7223-7226, 2012 (SCI-Expanded)
- XIX. **Mechanoradicals Created in "Polymeric Sponges" Drive Reactions in Aqueous Media**
Baytekin H. T., Baytekin B., Grzybowski B. A.
ANGEWANDTE CHEMIE-INTERNATIONAL EDITION, vol.51, no.15, pp.3596-3600, 2012 (SCI-Expanded)
- XX. **Material Transfer and Polarity Reversal in Contact Charging**
Baytekin H. T., Baytekin B., Incorvati J. T., Grzybowski B. A.
ANGEWANDTE CHEMIE-INTERNATIONAL EDITION, vol.51, no.20, pp.4843-4847, 2012 (SCI-Expanded)
- XXI. **The Mosaic of Surface Charge in Contact Electrification**
Baytekin H. T., Patashinski A. Z., Branicki M., Baytekin B., Soh S., Grzybowski B. A.
SCIENCE, vol.333, no.6040, pp.308-312, 2011 (SCI-Expanded)
- XXII. **Is Water Necessary for Contact Electrification?**
Baytekin H. T., Baytekin B., Soh S., Grzybowski B. A.
ANGEWANDTE CHEMIE-INTERNATIONAL EDITION, vol.50, no.30, pp.6766-6770, 2011 (SCI-Expanded)
- XXIII. **Surface analytical characterization of micro-fluidic devices hot embossed in polymer wafers: Surface chemistry and wettability**
Baytekin H. T., Wirth T., Gross T., Sahre M., Unger W. E. S., Theisen J., Schmidt M.
SURFACE AND INTERFACE ANALYSIS, vol.42, no.8, pp.1417-1431, 2010 (SCI-Expanded)
- XXIV. **Metallo-Supramolecular Nanospheres via Hierarchical Self-Assembly**
Baytekin H. T., Baytekin B., Schulz A., Springer A., Gross T., Unger W., Artamonova M., Schlecht S., Lentz D., Schalley C. A.
CHEMISTRY OF MATERIALS, vol.21, no.13, pp.2980-2992, 2009 (SCI-Expanded)
- XXV. **Hierarchical Self-Assembly of Metallo-Supramolecular Nanospheres**
Baytekin H. T., Baytekin B., Schulz A., Schalley C. A.

- SMALL, vol.5, no.2, pp.194-197, 2009 (SCI-Expanded)
- XXVI. **Dendrimer Disassembly in the Gas Phase: A Cascade Fragmentation Reaction of Frechet Dendrons**
 Baytekin B., Baytekin H. T., Hahn U., Reckien W., Kirchner B., Schalley C. A.
 CHEMISTRY-A EUROPEAN JOURNAL, vol.15, no.29, pp.7139-7149, 2009 (SCI-Expanded)
- XXVII. **Characterization of Self-Assembled Metallo-dendrimers in Solution, in the Gas Phase, and at Air/Solid Interfaces**
 Baytekin H. T., Sahre M., Rang A., Engeser M., Schulz A., Schalley C. A.
 SMALL, vol.4, no.10, pp.1823-1834, 2008 (SCI-Expanded)
- XXVIII. **Determination of wettability of surface-modified hot-embossed polycarbonate wafers used in microfluidic device fabrication via XPS and ToF-SIMS**
 Baytekin H. T., Wirth T., Gross T., Treu D., Sahre M., Theisen J., Schmidt M., Unger W. E. S.
 SURFACE AND INTERFACE ANALYSIS, vol.40, no.3-4, pp.358-363, 2008 (SCI-Expanded)
- XXIX. **Reactivity of self-assembled supramolecular complexes in the gas phase: A supramolecular neighbor group effect**
 Engeser M., Rang A., Ferrer M., Gutierrez A., Baytekin H. T., Schalley C. A.
 INTERNATIONAL JOURNAL OF MASS SPECTROMETRY, vol.255, pp.185-194, 2006 (SCI-Expanded)
- XXX. **Mass spectrometric studies of non-covalent compounds: why supramolecular chemistry in the gas phase?**
 Baytekin B., Baytekin H. T., Schalley C. A.
 ORGANIC & BIOMOLECULAR CHEMISTRY, vol.4, no.15, pp.2825-2841, 2006 (SCI-Expanded)
- XXXI. **Mass spectrometry as a tool in dendrimer chemistry: from self-assembling dendrimers to dendrimer gas-phase host-guest chemistry**
 Schalley C. A., Baytekin B., Baytekin H. T., Engeser M., Felder T., Rang A.
 JOURNAL OF PHYSICAL ORGANIC CHEMISTRY, vol.19, no.8-9, pp.479-490, 2006 (SCI-Expanded)
- XXXII. **A molecular NAND gate based on Watson-Crick base pairing**
 Baytekin H. T., Akkaya E.
 ORGANIC LETTERS, vol.2, no.12, pp.1725-1727, 2000 (SCI-Expanded)

Refereed Congress / Symposium Publications in Proceedings

- I. **Seeing is Believing Scanning Probe Microscopy of Electrification**
 BAYTEKİN H. T., BAYTEKİN B., GRZYBOWSKI B. A.
 ESA Annual Meeting on Electrostatics 2013, 11 - 13 June 2013
- II. **Scanning Probe Microscopy to Visualize Tribocharging on Polymers and Polymer Blends**
 BAYTEKİN H. T., BAYTEKİN B., PATASHINSKI A. Z., GRZYBOWSKI B. A.
 2013 MRS Spring Meeting & Exhibit, 1 - 05 April 2013
- III. **Contact electrification of polymers custom made charging**
 BAYTEKİN H. T., BAYTEKİN B., INCORVATI J. T., GRZYBOWSKI B. A.
 243rd ACS National Meeting, 24 - 29 March 2012
- IV. **Material Transfer in Contact Electrification**
 BAYTEKİN H. T., BAYTEKİN B., PATASHINSKI A. Z., GRZYBOWSKI B. A.
 ESA Annual Meeting on Electrostatics 2011, 12 - 14 June 2011
- V. **Just by squeezing Starting with Hydrogen peroxide production by mechanically treated polymers**
 BAYTEKİN B., BAYTEKİN H. T., TEJERINA B., GRZYBOWSKI B. A.
 241st ACS National Meeting, 27 - 31 March 2011
- VI. **Seeing charges on polymer surfaces Kelvin Force Microscopy of polymers**
 BAYTEKİN H. T., BAYTEKİN B., PATASHINSKI A. Z., GRZYBOWSKI B. A.
 241st ACS National Meeting, 27 - 31 March 2011
- VII. **Contact electrification in water free media**
 BAYTEKİN B., BAYTEKİN H. T., GRZYBOWSKI B. A.

241st ACS National Meeting, 27 - 31 March 2011

VIII. **Seeing charges on polymer surfaces: Kelvin force microscopy of charged polymers**

Baytekin H. T., Baytekin B., Patashinski A. Z., Grzybowski B. A.

241st National Meeting and Exposition of the American-Chemical-Society (ACS), California, United States Of America, 27 - 31 March 2011, vol.241

IX. **Mechanochemical Reactions by Polymer Compression**

BAYTEKİN B., BAYTEKİN H. T., TEJERINA B., GRZYBOWSKI B. A.

3rd EuCheMS Chemistry Congress, 29 August - 02 September 2010

X. **Investigation of Wettability of Surface Modified Polymer Wafers Used in Micro Fluidic Device Fabrication**

BAYTEKİN H. T., UNGER W. E. S., THEISEN J., SCHMIDT M.

Surface Analysis society of Japan, International Symposium on Practical Surface Analysis, 25 - 27 November 2008

XI. **Photoactive Metallo supramolecular Squares**

BAYTEKİN H. T., SCHALLEY C. A.

1st EuCheMS Chemistry Congress, 27 - 31 March 2006

XII. **Modulation of Ruthenium II MLCT Emission by Metal Ions**

BAYTEKİN H. T., AKKAYA E. U.

220th ACS National Meeting, 20 - 24 August 2000

XIII. **Development of a Laser diode fiber Optic Fluorometer for in situ Phytoplankton Measurement**

BAYTEKİN H. T., GÖKMEN A.

Colloquium Spectroscopicum Internationale XXX, 21 - 26 September 1997

Metrics

Publication: 45

Citation (WoS): 1631

Citation (Scopus): 1676

H-Index (WoS): 18

H-Index (Scopus): 19

Scholarships

Deutscher Akademischer Austausch Dienst (DAAD), Other International Organizations, 2003 - 2003

Awards

Baytekin H. T., EXCELLENT SCIENCE - Marie Skłodowska-Curie , Bilkent University, March 2016

Baytekin H. T., ACS Postdoc to faculty workshop 2012 participant travel award (American Chemical Society), 2012., Acs, June 2012