

HAKAN KAYGUSUZ

Dilmenler Cad. 26 Bağcılar 34218 Istanbul Turkey
+90 212 604 0100 i. 4023 | hakan.kaygusuz@altinbas.edu.tr

EXPERIENCE

Assistant professor of chemistry and physics	09/2017 – present
Altınbaş University	
Vice dean , School of Engineering and Natural Sciences	03/2018 – present
Head of the Department , Department of Basic Sciences	02/2019 – present
Instructor , Department of Bioinformatics and Genetics	03/2017 – 06/2017
Kadir Has University	
Researcher , Stranski Laboratory for Theoretical and Physical Chemistry	04/2014 – 04/2017
Technische Universität Berlin	
Research assistant , Department of Chemistry	02/2010 – 02/2017
Istanbul Technical University	

EDUCATION

Dr. rer. nat., Chemistry , Technische Universität Berlin (TU Berlin)	2017
Ph.D., Chemistry , Istanbul Technical University (ITU)	
Thesis title: Layered and composite biopolymers: mechanical, physical and antimicrobial properties	
Advisors: Prof. Dr. Bedia Erim Berker and Prof. Dr. Regine von Klitzing	
M.Sc. in Chemistry , ITU	2011
B.Sc. in Physics Engineering , ITU	2009
B.Sc. in Chemistry , ITU	2008

PROJECTS

Advisor in Electrical-Electronics Systems, TÜBİTAK Efficiency Challenge “EVA” Team	2019–
Jury member & organizer of International Student Project Competition in Informatics and Applications, Altınbaş University	2019–
Jury member & organizer of International Student Project Competition in Robotics, Altınbaş University	2019–
Researcher, ITU-BAP: <i>Seryum iyonu ve nano seryum oksit içerikli yeni yara kapatici çitosan bazlı hidrojel filmlerin hazırlanması: Antibakteriyel ve fiziksel özelliklerinin incelenmesi</i>	2017–
Assistant researcher, ITU-BAP: <i>Biyo-polimer küre ve tabakalı filmlerin hazırlanması ve fiziksel özelliklerinin incelenmesi</i>	2016–2017

AWARDS & SCHOLARSHIP

<i>Magna cum laude</i> , TU Berlin	2017
Best poster presentation award, NTCA-2016 Conference	2016
Joint Doctoral Scholarship, TÜBİTAK	2014
First graduate in ITU history to complete Physics & Chemistry double major	2009

EDITORIAL DUTIES

Associate editor, AURUM Journal of Engineering Systems and Architecture	2018 – present
Reviewing 15 journals, including Chemosphere, IEEE Access, Food Chemistry, Reactive and Functional Polymers.	

CONFERENCE ORGANIZATIONS

Steering committee member, 10th International Conference on Image Processing, Wavelet and Applications (IWW2019), Kocaeli, Turkey	2019
Main organizer, Basic Sciences Seminars of Altınbaş University, Turkey	2019 – present

RESEARCH

Interests: Physical chemistry, materials science, biopolymers, statistics, informetrics

Skills: XRD, AFM, ellipsometry, GC, HPLC, CE, Raman, fluorescence, single crystal growth, sol-gel, layer-by-layer deposition, nanofabrication

Membership: Deutsche Physikalische Gesellschaft (Member 2015-)

Group leader of Engineering Sciences Research Group (2018 – present)

TEACHING

Altınbaş University:

- General Chemistry I&II, Physics I&II, Biopolymers, Introduction to Engineering Sciences, Advanced Ceramic Technology
- Supervising 4 masters theses
- Organizing “*Yetenek Akademisi*” with Vega High Schools

Kadir Has University:

- Organic Chemistry Lab., Physics II Lab.

Istanbul Technical University:

- General Chem., Analytical Chem., Instrumental Analysis, Physical Chem. Laboratories
- Advisor of Chemistry Student Society (2016-17)

OTHER ADMINISTRATIVE DUTIES

Member, Legislation Commission (*Mevzuat Komisyonu*), Altınbaş Uni.

Member, Student Satisfaction Commission (*Öğrenci Memnuniyeti Komisyonu*), Altınbaş Uni.

OTHER ACTIVITIES

- Club member of İstanbulspor (2014-present)
- Secretary-general of İstanbulspor Supporters Association (2017-present)
- Founding member of ITU Chemistry Society (2005-2008)
- Free courses for high school students on science, engineering and history of science.
- Languages: Turkish, English, German, Mongolian

PUBLICATION LIST

SCI-Journal Articles

* stands for corresponding author

19. G. Gezek, P. Hashemi, Z. Kalaycıoğlu, **H. Kaygusuz**, G. Sarıoğlu, S. Döker, T. Dirmenci, F.B. Erim*, Evaluation of some Turkish Salvia species by principal component analysis based on their vitamin B2, mineral composition, and antioxidant properties; *LWT-Food Science and Technology*, **2019**, 100, 287-293
18. G. Balkız, E. Pingo, N. Kahya, **H. Kaygusuz***, F.B. Erim, Graphene oxide/alginate quasi-cryogels for removal of methylene blue; *Water, Air, & Soil Pollution*, **2018**, 229(4), 131
17. N. Kahya, S. Bener, **H. Kaygusuz**, G.A. Evingür, F.B. Erim*, Adsorptive removal kinetics of anionic dye onto chitosan films doped with graphene oxide: An in situ fluorescence monitoring; *Chemical Engineering Communications*, **2018**, 205(7), 881-887.
16. N. Kahya, **H. Kaygusuz**, F.B. Erim*, Aqueous Removal of Sodium Dodecyl Benzene Sulfonate (SDBS) by Chitosan Films; *Journal of Polymers and the Environment*, **2018**, 26(5), 2166-2172.
15. **H. Kaygusuz**, E. Torlak, G.A. Evingür, İ. Özen, R. von Klitzing, F.B. Erim*, Antimicrobial cerium ion-chitosan crosslinked alginate biopolymer films: A novel and potential wound dressing; *International Journal of Biological Macromolecules*, **2017**, 105, 1161-1165
14. **H. Kaygusuz***, S. Micciulla, F.B. Erim, R. von Klitzing, Effect of anionic surfactant on alginate-chitosan polyelectrolyte multilayer thickness; *Journal of Polymer Science Part B: Polymer Physics*, **2017**, 55, 1798-1803.
13. Z. Kalaycıoğlu, **H. Kaygusuz**, S. Döker, S. Kolaylı, F.B. Erim*, Characterization of Turkish honeybee pollens by principal component analysis based on their individual organic acids, sugars, minerals, and antioxidant activities; *LWT – Food Science and Technology*, **2017**, 84, 402-408.
12. T. El Boukhari*, **H. Kaygusuz**, G. Bilir, F.B. Erim, G. Özen, Microstructural and optical properties of SiO₂ glasses doped with ZnSe Quantum Dots and Nd³⁺ Ions; *Physica B: Condensed Matter*, **2017**, 509, 41-45.
11. G. Uyar, **H. Kaygusuz**, F.B. Erim*, Methylene blue removal by alginate-clay quasi-cryogel beads; *Reactive and Functional Polymers*, **2016**, 106, 1-7.
10. **H. Kaygusuz**, G.A. Evingür, Ö. Pekcan, R. von Klitzing, F.B. Erim*, Surfactant and Metal Ion Effects on the Mechanical Properties of Alginate Hydrogels; *International Journal of Biological Macromolecules*, **2016**, 92, 220-224.
9. **H. Kaygusuz**, F. Tezcan, F.B. Erim*, O. Yildiz, H. Sahin, Z. Can, S. Kolaylı*, Characterization of Anatolian honeys based on minerals, bioactive components and principal component analysis; *LWT – Food Science and Technology*, **2016**, 68, 273-279.
8. **H. Kaygusuz***, M.H. Çoşkunırmak, N. Kahya, F.B. Erim, Aluminum Alginate-Montmorillonite Composite Beads for Defluoridation of Water; *Water, Air, & Soil Pollution*, **2015**, 226, 2257.
7. **H. Kaygusuz**, M. Uysal, V. Adımcılar, F.B. Erim*, Natural alginate biopolymer montmorillonite clay composites for vitamin B2 delivery; *Journal of Bioactive and Compatible Polymers*, **2015**, 30, 48-56.

6. H. Kaygusuz, S. Uzaşçı, F.B. Erim*, Removal of Fluoride from Aqueous Solution Using Aluminum Alginate Beads; *CLEAN – Soil, Air, Water*, **2014**, 43, 724-730.

5. G.A. Evingür*, H. Kaygusuz, F.B. Erim, Ö. Pekcan, Gelation of PAAm-PVP composites: A fluorescence study; *International Journal of Modern Physics B*, **2014**, 28, 1450122.

4. G.A. Evingür*, H. Kaygusuz, F.B. Erim, Ö. Pekcan, Effect of Calcium Ion Concentration on Small Molecule Desorption from Alginate Beads; *Journal of Macromolecular Science, Part B*, **2014**, 53, 1157-1167.

3. H. Kaygusuz*, G. Bilir, F. Tezcan, F.B. Erim, G. Özen*, Biopolymer-assisted synthesis of yttrium oxide nanoparticles, *Particuology*, **2014**, 14, 19-23.

2. H. Kaygusuz, F.B. Erim, Ö. Pekcan, G.A. Evingür*, Cation Effect on Slow Release from Alginate Beads: A Fluorescence Study; *Journal of Fluorescence*, **2014**, 24, .161-167

1. H. Kaygusuz, F.B. Erim*, Alginate/BSA/montmorillonite composites with enhanced protein entrapment and controlled release efficiency; *Reactive and Functional Polymers*, **2013**, 73, 1420-1425.

Other journal articles

H. Kaygusuz, Türkiye'ye Özgü Bitki ve Gıda Örneklerinin Temel Bileşenler Analiziyle Sınıflandırılması; *Aurum Journal of Engineering Systems and Architecture*, **2018**, 2(1), 11-16.

Book chapter

G. Özen, H. Kaygusuz, M.L. Öveçoğlu: Formation and transformation of the molecular units in tellurium based oxide glasses, *Frontier Developments in Optics and Spectroscopy*, 2007, ed. B. di Bartolo and O. Forte, ISBN 978-1-936036-00-4

Dissertation

H. Kaygusuz, Layered and composite biopolymers: mechanical, physical and antimicrobial properties, Technische Universität Berlin, 2017.

Conference abstracts and presentations – International

Most recent 3 of 14 are shown. Full list is available upon request.

- H. Kaygusuz, F.B. Erim, Biopolymer-assisted synthesis of cerium oxide nanoparticles, International Porous and Powder Materials Symposium and Exhibition 2017, 09.2017
- P. Hashemi, G. Gezek, H. Kaygusuz, F. Tezcan, F.B. Erim, Sensitive micronutrient analysis in spices and monofloral honeys by capillary electrophoresis coupled with LIF detector, ISC 2016 31st International Symposium on Chromatography, 09.2016
- N. Kahya, G.A. Evingür, S. Bener, H. Kaygusuz, F.B. Erim, Optical Properties and Characterization of Graphene Oxide Chitosan Composites through Tensile Testing TGA FTIR Analysis, Trends in Nanotechnology 2016, 09.2016

Conference abstracts and presentations – National (Turkey)

Most recent 3 of 21 are shown. Full list is available upon request.

- H. Kaygusuz, F.B. Erim, A.N. Berker, Monte Carlo Capillary Electrophoresis, 12. Mirror Conference-Statistical and Condensed Matter Physics, 12.2018
- H. Kaygusuz, Chemistry research output of Turkey in the last decade, 22. Sıvı Hal Sempozyumu, 12.2018.

- M.A. Al-Nuwab, H. Kaygusuz, Effect of temperature on short-length erbium-doped fiber amplifiers, 22. Sıvı Hal Sempozyumu, 12.2018.

Laboratory manual

H. Kaygusuz, *General Chemistry Laboratory: a Basic Approach* 2017, free of charge.

Non-scientific publications and interviews in media/press

Bi' Tık Dünya, Haber Global TV, 13.04.2019

"A question for you, professor!" – Kantin Magazine, April 2019

"İcat çıkardılar" – Milliyet Newspaper, 15.02.2019.

"Türk bilim insanlarından deniz temizliğinde önemli buluş" – Hürriyet Newspaper, 13.02.2019.

"Kimyasal kazalara klasik yöntemle müdahale etmek kötü sonuçlara neden oluyor" – Hürriyet Newspaper, 31.08.2018.