

## Assoc. Prof. MEHMET ATAKAY

### Personal Information

Office Phone: [+90 312 297 6744](tel:+903122976744)

Email: [mehmetatakay@hacettepe.edu.tr](mailto:mehmetatakay@hacettepe.edu.tr)

Web: <https://avesis.hacettepe.edu.tr/mehmetatakay>

Address: Hacettepe Üniv Beytepe Kampüsü Kimya Bölümü Beytepe / Çankaya / ANKARA

### International Researcher IDs

ORCID: 0000-0002-7102-2974

ScopusID: 55123179100

Yoksis Researcher ID: 39634

### Education Information

Doctorate, Hacettepe University, Fen Bilimleri, Kimya, Turkey 2010 - 2016

Postgraduate, Hacettepe University, Fen Bilimleri, Kimya, Turkey 2008 - 2010

Undergraduate, Hacettepe University, Fen Fakültesi, Kimya, Turkey 2004 - 2008

### Dissertations

Doctorate, Model Sentetik Polimerlerin ve Komplekslerinin Gaz Fazı Karakteristiklerinin İncelenmesi, Hacettepe Üniversitesi, Fen Bilimleri Enstitüsü, Kimya (Dr), 2016

Postgraduate, MALDI-MS ile etkin fosfopeptit analizleri için sol-jel yüzeylerin geliştirilmesi, Hacettepe Üniversitesi, Fen Bilimleri Enstitüsü, Kimya (YI) (Tezli), 2010

### Research Areas

Chemistry, Analytical Chemistry, Separation Methods, Bioanalytical Methods, Mass Spectroscopy, Molecular Mass Spectroscopy, Natural Sciences

### Academic Titles / Tasks

Assistant Professor, Hacettepe University, Fen Fakültesi, Kimya Bölümü, 2020 - Continues

Research Assistant, Hacettepe University, Fen Fakültesi, Kimya Bölümü, 2009 - 2020

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

- Co-exposure effect of different colour of LED lights and increasing temperature on zebrafish larvae (*Danio rerio*): Immunohistochemical, metabolomics, molecular and behaviour approaches**  
Pir R., SULUKAN E., ŞENOL O., ATAKAY M., BARAN A., Kankaynar M., Yıldız E., SALİH B., CEYHUN S. B.  
SCIENCE OF THE TOTAL ENVIRONMENT, 2024 (SCI-Expanded)
- Dynamics of peptides released from cow milk fermented by kefir microorganisms during**

**fermentation and storage periods**

Aksoy S., Kayili H. M., ATAKAY M., Kirmaci H. A., SALİH B.

INTERNATIONAL DAIRY JOURNAL, 2024 (SCI-Expanded)

- III. **Characterization of Monoclonal Antibody N-Glycan Conformations by Novel Hydrophilic Interaction Liquid Chromatography (HILIC) with Trapped Ion Mobility Mass Spectrometry (TIMS) and Fluorescence Detection (FLD)**  
Avci I., ATAKAY M., Kayili H. M., SALİH B.  
ANALYTICAL LETTERS, 2024 (SCI-Expanded)
- IV. **In vitro study on the competitive reactions between arsenite and selenite with glutathione**  
Ozkan C. H., ATAKAY M., SALİH B., ERTAŞ G.  
JOURNAL OF MASS SPECTROMETRY, no.5, 2024 (SCI-Expanded)
- V. **Utilizing linkage-specific ethyl-esterification approach to perform in-depth analysis of sialylated N-glycans present on milk whey glycoproteins**  
Kayili H. M., Barlas N., Demirhan D. B., YAMAN M. E., ATAKAY M., GÜLER Ü., KARA M., TEKGÜNDÜZ K. Ş., SALİH B.  
Food Chemistry, vol.421, 2023 (SCI-Expanded)
- VI. **Monitoring Conformational Changes of Lysozyme–Polyelectrolyte Complexes Using Trapped Ion Mobility-Mass Spectrometry (IM-MS)**  
ATAKAY M.  
Analytical Letters, vol.56, no.8, pp.1377-1398, 2023 (SCI-Expanded)
- VII. **Isolation and Characterization of Rare Flavone Tetraglycosides from the Seeds of the Bioactive Plant: Peganum harmala L.**  
TAŞTEKİN N. H., ATAKAY M., SALİH B., Basaran A. A.  
ANALYTICAL LETTERS, vol.56, no.9, pp.1502-1513, 2023 (SCI-Expanded)
- VIII. **Novel ABA-type Block Copolymers from Telechelic PEG-initiated Hydrogen-transfer Polymerization**  
ÇATIKER E., ATAKAY M., SALİH B.  
SOFT MATERIALS, vol.20, no.2, pp.232-239, 2022 (SCI-Expanded)
- IX. **Chemometrics assisted untargeted metabolomic analysis to explore metabolic alterations in chronic urticaria via LC/Q-TOF/MS/MS**  
KOÇAK Ö. F., ATAKAY M., YAMAN M. E., ŞENOL O., ERKAYMAN M. H., SOLAK ESEN B., SALİH B.  
SCANDINAVIAN JOURNAL OF CLINICAL & LABORATORY INVESTIGATION, vol.82, pp.533-540, 2022 (SCI-Expanded)
- X. **Novel (-)-carvone derivatives as potential anticonvulsant and analgesic agents**  
Nesterkina M., Barbalat D., Konovalova I., Shishkina S., ATAKAY M., SALİH B., Kravchenko I.  
NATURAL PRODUCT RESEARCH, vol.35, no.23, pp.4978-4987, 2021 (SCI-Expanded)
- XI. **Synthesis and characterization of the ABA-type poly(ester-ether-ester) block copolymers**  
Catiker E., Ozturk T., ATAKAY M., SALİH B.  
JOURNAL OF MACROMOLECULAR SCIENCE PART A-PURE AND APPLIED CHEMISTRY, vol.57, no.8, pp.600-609, 2020 (SCI-Expanded)
- XII. **Conformational Characterization of Polyelectrolyte Oligomers and Their Noncovalent Complexes Using Ion Mobility-Mass Spectrometry**  
ATAKAY M., Aksakal F., BOZKAYA U., SALİH B., Wesdemiotis C.  
JOURNAL OF THE AMERICAN SOCIETY FOR MASS SPECTROMETRY, vol.31, no.2, pp.441-449, 2020 (SCI-Expanded)
- XIII. **Site-Specific characterization of peptide-polymer conjugates in various stoichiometries by MALDI-Tandem mass spectrometry**  
Ulku O., ATAKAY M., Kohneshahri M. Y., UZUN C., SALİH B.  
MICROCHEMICAL JOURNAL, vol.152, 2020 (SCI-Expanded)
- XIV. **Synthesis and characterization of novel ABA type poly(Ester-ether) triblock copolymers**  
Catiker E., Ozturk T., ATAKAY M., SALİH B.  
JOURNAL OF POLYMER RESEARCH, vol.26, no.5, 2019 (SCI-Expanded)
- XV. **Synthesis and characterization of amphiphilic triblock copolymers including -alanine/-methyl--alanine and ethylene glycol by "click" chemistry**

Catiker E., Meyvaci E., ATAKAY M., SALİH B., Ozturk T.

POLYMER BULLETIN, vol.76, no.4, pp.2113-2128, 2019 (SCI-Expanded)

- XVI. **Characterization of supramolecular peptide-polymer bioconjugates using multistage tandem mass spectrometry**  
Wei B., Gerislioglu S., ATAKAY M., SALİH B., Wesdemiotis C.  
INTERNATIONAL JOURNAL OF MASS SPECTROMETRY, vol.436, pp.130-136, 2019 (SCI-Expanded)
- XVII. **Fast purification of glycans and glycopeptides using silk-packed micropipette tip for matrix-assisted laser desorption/ionization-mass spectrometry and high-performance liquid chromatography-fluorescence detection analysis**  
Kayili H. M., Barlas N., ATAKAY M., SALİH B.  
MICROCHEMICAL JOURNAL, vol.139, pp.492-499, 2018 (SCI-Expanded)
- XVIII. **Use of Sulfonates as Desorption Agents for Phosphopeptide Elution from an Anion-exchange Material**  
ATAKAY M., ÇELİKBIÇAK Ö., SALİH B.  
ANALYTICAL LETTERS, vol.51, no.5, pp.760-772, 2018 (SCI-Expanded)
- XIX. **Functional Substituted Phthalocyanines Bearing Ter-pyridine Complexes as Macromolecular Oxidation Catalysts for Bleaching Systems**  
Sen P., Yildiz S. Z., DEGE N., ATAKAY M., SALİH B.  
CHEMISTRYSELECT, vol.2, no.9, pp.2643-2650, 2017 (SCI-Expanded)
- XX. **Comparison of Two Methods for Purification of Enterocin B, a Bacteriocin Produced by Enterococcus faecium W3**  
Dundar H., ATAKAY M., CELIKBICAK O., SALİH B., Bozoglu F.  
PREPARATIVE BIOCHEMISTRY & BIOTECHNOLOGY, vol.45, no.8, pp.796-809, 2015 (SCI-Expanded)
- XXI. **A Trypsin Immobilized Sol-Gel for Protein Identification in MALDI-MS Applications**  
ÇELİKBIÇAK Ö., ATAKAY M., Guler U., SALİH B.  
ANALYTICAL LETTERS, vol.47, no.4, pp.707-719, 2014 (SCI-Expanded)
- XXII. **A novel tantalum-based sol-gel packed microextraction syringe for highly specific enrichment of phosphopeptides in MALDI-MS applications**  
ÇELİKBIÇAK Ö., ATAKAY M., Guler Ü., SALİH B.  
ANALYST, vol.138, no.15, pp.4403-4410, 2013 (SCI-Expanded)
- XXIII. **Specific enrichment and direct detection of phosphopeptides on insoluble transition metal oxide particles in matrix-assisted laser desorption/ionization mass spectrometry applications**  
ÇELİKBIÇAK Ö., KAYNAR G., ATAKAY M., Guler Ü., Kayili H. M., SALİH B.  
EUROPEAN JOURNAL OF MASS SPECTROMETRY, vol.19, no.3, pp.151-162, 2013 (SCI-Expanded)
- XXIV. **Amine-Functionalized Sol-Gel-Based Lab-in-a-Pipet-Tip Approach for the Fast Enrichment and Specific Purification of Phosphopeptides in MALDI-MS Applications**  
ATAKAY M., ÇELİKBIÇAK Ö., SALİH B.  
ANALYTICAL CHEMISTRY, vol.84, no.6, pp.2713-2720, 2012 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Analysis of Conformational Differences of Copper and Alkali Metal Complexes of Insulin Using Trapped Ion Mobility-Mass Spectrometry Technique**  
ATAKAY M.  
Hacettepe Journal of Biology and Chemistry, vol.51, no.1, pp.113-124, 2023 (Peer-Reviewed Journal)
- II. **Synthesis and characterization of novel poly(alpha-methyl beta-alanine-b-lactone)s through hydrogen-transfer and ring-opening polymerization**  
ÇATIKER E., KIRLAK S., ATAKAY M., SALİH B.  
OVIDIUS UNIVERSITY ANNALS OF CHEMISTRY, vol.33, no.1, pp.78-83, 2022 (ESCI)
- III. **The correlation between botanical source and the biologically active compounds of propolis**

Celemli Ö., ATAKAY M., Sorkun K.

ISTANBUL JOURNAL OF PHARMACY, vol.49, no.2, pp.81-87, 2019 (ESCI)

IV. **(2S,5R)-2-Isopropyl-5-methylcyclohexanone Hydrazones**

Nesterkina M., Barbalat D., Zheltvay I., Rakipov I., ATAKAY M., SALİH B., Kravchenko I.

MOLBANK, no.2, 2019 (ESCI)

V. **Degradation of Crystal Violet Dye from Waters by Layered MnO<sub>2</sub> and Nanocomposite-MnO<sub>2</sub>@MnFe<sub>2</sub>O<sub>4</sub> Catalysts**

ELMACI G., Özgenç G., ATAKAY M., SALİH B., KARAN B.

Hacettepe Journal of Biology and Chemistry, vol.45, no.4, pp.573-580, 2017 (Peer-Reviewed Journal)

## Books & Book Chapters

I. **Synthesis and Characterization of Novel Star-Type Triarm Block Copolymers Including Poly (B-Methyl B-Alanine) by Raft Polymerization**

SAVAŞ B., ÇATIKER E., ÖZTÜRK T., MEYVACI E., ATAKAY M., SALİH B.

in: Advanced Materials, Polymers, and Composites, Omari Mukbaniani, DSc Marc J. M. Abadie, DSc Tamara Tatrishvili, DSc, Editor, Apple Academic Press, Toronto, pp.323-330, 2021

II. **Novel Aliphatic Polyester-Based Macromonomers**

ÇATIKER E., SALİH B., Güven O., ATAKAY M.

in: SCIENCE AND TECHNOLOGY OF POLYMERS AND ADVANCED MATERIALS, Omari V. Mukbaniani, DSc Tamara N. Tatrishvili, PhD Marc J. M. Abadie, DSc, Editor, Apple Academic Press Inc., Oakville, pp.135-148, 2019

III. **Sol-Gel Materials Used in Phosphoproteomics and Glycoproteomics Applications**

Kayılı H. M., Atakay M., Salih B.

in: Recent Applications in Sol-Gel Synthesis, Usha Chandra, Editor, InTech, London, pp.213-230, 2017

## Refereed Congress / Symposium Publications in Proceedings

I. **Mass Spectrometric Characterization of Polymer-Protein Conjugates**

ATAKAY M., Ülkü Ö., Kohneshahri M. Y., UZUN C., SALİH B.

3rd International Mediterranean Science and Engineering Congress, Adana, Turkey, 24 - 26 October 2018

II. **Synthesis And Characterization Of Novel Graft Copolymers For Medical Applications**

ÇATIKER E., ATAKAY M., SALİH B.

Eastwest Chemistry Conference, 10 - 12 October 2018

III. **Synthesis and Characterization of Poly(-alanine-b-ethylene Glycol-b--alanine) Atriblock Copolymers by "Click" Chemistry**

Meyvacı E., ÇATIKER E., ATAKAY M., SALİH B., ÖZTÜRK T.

VII. Polimer Bilimi ve Teknolojisi Kongresi, Turkey, 9 - 12 September 2018

IV. **Yeni Polieter-amit Blok Kopolimerlerin Sentezi Ve Karakterizasyonu**

ÇATIKER E., ATAKAY M., SALİH B., Bedir A., Kırık S.

VII. Polimer Bilim ve Teknoloji Kongresi, Turkey, 9 - 12 September 2018

V. **Poli(2-Metil-3-Hidroksi Propionat) Sentezi Ve Karakterizasyonu**

ÇATIKER E., Bedir A., Kırık S., ATAKAY M., SALİH B.

VII. Polimer Bilim ve Teknoloji Kongresi, Turkey, 9 - 12 September 2018

VI. **Characterization of the non-covalent interactions between poly (styrene sulfonate) and peptides using multistage tandem mass spectrometry**

Wei B., Gerislioglu S., ATAKAY M., SALİH B., Wesdemiotis C.

256th National Meeting and Exposition of the American-Chemical-Society (ACS) - Nanoscience, Nanotechnology and Beyond, Massachusetts, United States Of America, 19 - 23 August 2018, vol.256

VII. **Monitoring Conformational Features of Protein-Polyelectrolyte Complexes Using Ion Mobility-Mass**

## **Spectrometry**

ATAKAY M., Wesdemiotis C., SALİH B.

8th Black Sea Basin Conference On Analytical Chemistry, İstanbul, Turkey, 9 - 11 May 2018

### **VIII. Novel Aliphatic Polyester Based Macromonomers**

ÇATIKER E., ATAKAY M., SALİH B., GÜVEN O.

Fifth Caucasian International Symposium on Polymers and Advanced Materials, 2 - 05 July 2017

### **IX. Enrichment of Phosphopeptides Using Poly-L-Lysine-Encapsulated Sol-Gel Material**

GÜLER TOKAT Ü., ATAKAY M., KAYILI H. M., SALİH B.

65TH ASMS Conference on Mass Spectrometry and Allied Topics, 4 - 08 June 2017

### **X. Conformational analysis of noncovalent polyelectrolyte complexes using ion mobility mass spectrometry**

ATAKAY M., Alalwiat A., SALİH B., Wesdemiotis C.

1st International Mediterranean Science and Engineering Congress, 26 - 28 October 2016

### **XI. Conformational analysis of noncovalent polyelectrolyte complexes using ion mobility mass spectrometry**

ATAKAY M., Alalwiat A., SALİH B., Wesdemiotis C.

1st International Mediterranean Science and Engineering Congress, 26 - 28 October 2016

### **XII. Whole-cell matrix-assisted laser desorption/ionization mass spectrometry for rapid detection of enterocin A and B**

Dundar H., ATAKAY M., AVCIOGLU B., SALİH B.

41st FEBS Congress on Molecular and Systems Biology for a Better Life, Kusadasi, Turkey, 3 - 08 September 2016, vol.283, pp.95

### **XIII. Investigating The Noncovalent Complex Formation of Proteins with Electrolytic Ligands in Gas Phase**

ATAKAY M., KAYILI H. M., SALİH B.

64th ASMS Conference on Mass Spectrometry and Allied Topics, 5 - 09 June 2016

### **XIV. Silk Based Glyco Enrichment Tip for Purification and Enrichment of Glycans and Glycopeptides**

KAYILI H. M., ATAKAY M., SALİH B.

64th ASMS Conference on Mass Spectrometry and Allied Topics, 5 - 09 June 2016

### **XV. Conformational characterization of polyelectrolyte complexes using Ion Mobility Mass Spectrometry**

ATAKAY M., Wesdemiotis C., SALİH B.

9th International Conference on Instrumental Methods of Analysis: Modern Trends and Applications, Kalamata, Greece, 20 - 24 September 2015

## **Supported Projects**

SALİH B., KAVAKLI C., ATAKAY M., KAYILI H. M., GÜLER TOKAT Ü., ÇELİKBIÇAK Ö., AÇAN N. L., BAŞARAN A. A., CB Strateji ve Bütçe Başkanlığı (Kalkınma Bakanlığı) Projesi, İleri Kütle Spektrometresi Araştırma Laboratuvarı, 2016 - Continues

SALİH B., VARLIOĞLU ÖZDEMİR B. K., BALTACI S., ATAKAY M., GÜLER Ü., Öztürk S., Avcı İ., Project Supported by Higher Education Institutions, Monoklonal Antikor Temelli Biyoteknolojik İlaçların Konformasyonel Analizi için Yeni Nesil İyon Hareketliliği Kütle Spektrometrisi Analiz Yöntemlerinin Geliştirilmesi (120Z532 nolu TÜBİTAK 1001 projesi için Ek Bütçe Desteği), 2022 - 2024

Kayılı H. M., Kırmacı H. A., Atakay M., Salih B., TUBİTAK Project, Determination of Changes in Basic Components of Milk in Kefir Fermentation and Storage Processes Using Mass Spectrometry-Based Omics-Approaches, 2020 - 2023

Kayılı H. M., Atakay M., Güler Ü., Yaman M. E., Salih B., TUBİTAK Project, Comprehensive Analyzes of Milk Whey N-Glycans with MALDI-TOF / TOF-MS Using the Binding-Specific Sialic Acid Esterification Approach and Region-Specific N- and O-Glycosylation Analysis of Milk Whey Proteomes, 2020 - 2021

İpek A., Sorkun K., Ülgentürk S., Salih B., Özkırım A., Demirci F., Özkök A., Gençay Çelemlı Ö., Özenirler Ç., Atakay M., Project Supported by Other Official Institutions, GÖKNAR, LADİN, MEŞE VE SEDİR SALGI BALLARININ ORJİNİ VE KARAKTERİZASYONU, 2017 - 2018

ATAKAY M., Project Supported by Higher Education Institutions, PROTEİN-POLİELEKTROLİT KOMPLEKSLERİNİN GAZ

FAZİ KONFORMASYONLARININ İNCELENMESİ, 2017 - 2018

SALİH B., ATAKAY M., KAYILI H. M., GÜLER TOKAT Ü., Project Supported by Higher Education Institutions,

SÜRDÜRÜLEBİLİR KÜTLE SPEKTROMETRİK ÇALIŞMALAR İÇİN LABORATUVAR ALTYAPISININ İYİLEŞTİRİLMESİ, 2015 - 2017

ATAKAY M., GÜLER TOKAT Ü., SALİH B., TUBITAK Project, Glikopeptitlerin İleri Kütle Spektrometrik Teknikler

Kullanılarak Hızlı Ve Verimli Analiz Edilebilmeleri İçin Çeşitli Malzemelerin ve Analitik Yöntemlerin Geliştirilmesi, 2015 - 2017

SALİH B., ATAKAY M., Project Supported by Higher Education Institutions, 9th International Conference on "Instrumental Methods of Analysis-Modern Trends and Applications" toplantısı için katılım desteği, 2015 - 2016

SALİH B., ATAKAY M., GÜLER TOKAT Ü., KAYILI H. M., Project Supported by Higher Education Institutions, Proteinlerin Ubikitinasyon Bölgelerinin Tayinleri, 2015 - 2015

TUBITAK Project, Fosfoproteomiks Çalışmaları için Fosfopeptitlerin Sol Jel Malzemeler Kullanılarak Zenginleştirilmesi, 2010 - 2012

## Patent

ATAKAY M., ÇELİKBIÇAK Ö., FOSFOPEPTİT ZENGİNLEŞTİRME AMACIYLA KULLANILAN BİR MAZLEME VE ÜRETİM YÖNTEMİ, Patent, CHAPTER C Chemistry; Metallurgy, Standard Registration, 2015

## Tasks In Event Organizations

Atakay M., 2nd International Environmental Chemistry Congress (EnviroChem), Scientific Congress, Antalya, Turkey, Kasım 2019

## Metrics

Publication: 56

Citation (WoS): 146

Citation (Scopus): 142

H-Index (WoS): 8

H-Index (Scopus): 7

## Scholarships

2211-Yurt İçi Lisansüstü Burs Programı, TUBITAK, 2010 - 2016

2214- A-Yurt Dışı Doktora Sırası Araştırma Burs Programı, TUBITAK, 2013 - 2014

2210 - Yurt İçi Lisansüstü Burs Programı, TUBITAK, 2008 - 2010

## Awards

Atakay M., • İhsan Doğramacı Outstanding Achievement Award, Hacettepe Üniversitesi, June 2008