

Assoc. Prof. FATOŞ ÇİĞDEM KİP

Personal Information

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Research Areas

Chemical Engineering and Technology, Chemical Technologies, Polymer Technology, Engineering and Technology

Academic Titles / Tasks

Associate Professor, Hacettepe University, Mühendislik Fakültesi, Kimya Mühendisliği Bölümü, 2022 - Continues

Assistant Professor, Hacettepe University, Mühendislik Fakültesi, Kimya Mühendisliği Bölümü, 2019 - 2022

Research Assistant, Hacettepe University, Mühendislik Fakültesi, Kimya Mühendisliği Bölümü, 2007 - 2019

Academic and Administrative Experience

Fakülte Yönetim Kurulu Üyesi, Hacettepe University, Mühendislik Fakültesi, Kimya Mühendisliği Bölümü, 2021 - Continues

Deputy Head of Department, Hacettepe University, Mühendislik Fakültesi, Kimya Mühendisliği Bölümü, 2019 - Continues

Courses

BASIC MATHEMATICAL MODELLING, Undergraduate, 2023 - 2024

MASS TRANSFER, Undergraduate, 2023 - 2024

TAŞINIM OLAYLARI I, Postgraduate, 2023 - 2024

Process Control, Undergraduate, 2019 - 2020

ATIKSU ARITIMI, Undergraduate, 2017 - 2018, 2016 - 2017

Undergraduate, 2018 - 2019

Advising Theses

Kip F. Ç., METAL ORGANİK KAFES YAPILARININ DİOL İÇEREN BİYOMOLEKÜL TAYİNİ VE İZOLASYONU İÇİN KULLANILABİLİRLİĞİNİN İNCELENMESİ, Postgraduate, S.PARLAK(Student), 2024

Kip F. Ç., Granül ve hidrofobik film yapılı piroteknik/termit malzeme sentezi ve karakterizasyonu, Postgraduate, H.KAMAL(Student), 2022

Published journal articles indexed by SCI, SSCI, and AHCI

1. A new magnetic heterogeneous catalyst for fast degradation of rhodamine B by peroxymonosulfate

oxidation: Monodisperse-porous and Fe₃O₄ incorporated manganese oxide microspheres

Kip Ç., Çolak G., POLAT M., Tuncel A.

Journal of Molecular Structure, vol.1301, 2024 (SCI-Expanded)

- II. **Monodisperse-porous silica microspheres with flexible phenylboronic acid functionalized-polycationic molecular brushes as a sorbent for teamed boronate affinity chromatography in batch and capillary column systems**
GÖKÇAL B., Kip Ç., Tuncel A.
Colloids and Surfaces A: Physicochemical and Engineering Aspects, vol.676, 2023 (SCI-Expanded)
- III. **A new multimodal magnetic nanozyme and a reusable peroxymonosulfate oxidation catalyst: Manganese oxide coated-monodisperse-porous and magnetic core-shell microspheres**
Özcan S., Süngü Akdoğan Ç. Z., POLAT M., Kip Ç., Tuncel A.
Chemosphere, vol.341, 2023 (SCI-Expanded)
- IV. **Ni(II) functionalized polyhedral oligomeric silsesquioxane based capillary monolith for purification of histidine-tagged proteins by immobilized metal affinity micro-chromatography**
Çambay Kuban F., Koçer İ., Kip Ç., Çelik E., Tuncel A.
Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences, vol.1225, 2023 (SCI-Expanded)
- V. **Monodisperse-porous Mn₅O₈ microspheres as an efficient catalyst for fast degradation of organic pollutants via peroxymonosulfate activation**
Ozcan S., YILDIRIM D., ÇILDIRIÖĞLU H. Ö., POLAT M., HAMALOĞLU K. Ö., Tosun R. B., KİP F. Ç., Tuncel A.
NEW JOURNAL OF CHEMISTRY, vol.46, no.30, pp.14605-14615, 2022 (SCI-Expanded)
- VI. **Highly Porous, Molecularly Imprinted Core-Shell Type Boronate Affinity Sorbent with a Large Surface Area for Enrichment and Detection of Sialic Acid Isomers**
Kip C., Demir M. C., Yildırım D., Hamaloğlu K. Ö., Çelikbıçak Ö., Tuncel A.
JOURNAL OF INORGANIC AND ORGANOMETALLIC POLYMERS AND MATERIALS, vol.31, no.7, pp.2806-2817, 2021 (SCI-Expanded)
- VII. **Recent trends in sorbents for bioaffinity chromatography**
Kip C., HAMALOĞLU K. Ö., Demir C., Tuncel A.
JOURNAL OF SEPARATION SCIENCE, vol.44, no.6, pp.1273-1291, 2021 (SCI-Expanded)
- VIII. **Monodisperse-porous cerium oxide microspheres as a new support with appreciable catalytic activity for a composite catalyst in benzyl alcohol oxidation**
HAMALOĞLU K. Ö., Tosun R. B., Ulu S., Kayı H., KAVAKLI C., AKKAŞ KAVAKLI P., Kip C., Tuncel A.
NEW JOURNAL OF CHEMISTRY, vol.45, no.4, pp.2019-2029, 2021 (SCI-Expanded)
- IX. **A new nanozyme with peroxidase-like activity for simultaneous phosphoprotein isolation and detection based on metal oxide affinity chromatography: Monodisperse-porous cerium oxide microspheres**
YILDIRIM D., Gokcal B., BÜBER E., Kip C., DEMİR M., Tuncel A.
CHEMICAL ENGINEERING JOURNAL, vol.403, 2021 (SCI-Expanded)
- X. **One-pot, direct glucose detection in human whole blood without using a dilution factor by a magnetic nanozyme with dual enzymatic activity**
Gokcal B., Kip C., Tuncel A.
JOURNAL OF ALLOYS AND COMPOUNDS, vol.843, 2020 (SCI-Expanded)
- XI. **Colorimetric determination of tumor cells via peroxidase-like activity of a cell internalizable nanozyme: Hyaluronic acid attached-silica microspheres containing accessible magnetite nanoparticles**
Kip C., ÇETİN E., Gokcal B., Savas B. O., Onur M. A., Tuncel A.
COLLOIDS AND SURFACES A-PHYSICO-CHEMICAL AND ENGINEERING ASPECTS, vol.598, 2020 (SCI-Expanded)
- XII. **A Magnetic Plasmonic Catalyst Based on Monodisperse-Porous Silica Microspheres for Rapid Reduction of 4-Nitrophenol**
Kip C.
JOURNAL OF INORGANIC AND ORGANOMETALLIC POLYMERS AND MATERIALS, vol.30, no.5, pp.1695-1702, 2020

(SCI-Expanded)

- XIII. **Surface-imprinted silica particles for Concanavalin A purification from *Canavalia ensiformis***
Razym G., Bakhshpour M., Yavuz H., Kip C., Tuncel A., DENİZLİ A.
JOURNAL OF CHROMATOGRAPHY B-ANALYTICAL TECHNOLOGIES IN THE BIOMEDICAL AND LIFE SCIENCES, vol.1136, 2020 (SCI-Expanded)
- XIV. **Polymeric template assisted synthesis of monodisperse-porous manganese oxide microspheres: a new nanozyme with oxidase-like activity allowing biomolecule determination via bimodal sensing**
Tosun R. B., Kip C., Tuncel A.
NEW JOURNAL OF CHEMISTRY, vol.43, no.47, pp.18505-18516, 2019 (SCI-Expanded)
- XV. **Magnetic-porous microspheres with synergistic catalytic activity of small-sized gold nanoparticles and titania matrix**
HAMALOĞLU K. Ö., Sag E., Kip C., ŞENLİK E., Kaya B. S., Tuncel A.
FRONTIERS OF CHEMICAL SCIENCE AND ENGINEERING, vol.13, no.3, pp.574-585, 2019 (SCI-Expanded)
- XVI. **Aggregation-resistant nanozyme containing accessible magnetite nanoparticles immobilized in monodisperse-porous silica microspheres for colorimetric assay of human genomic DNA**
Ogut E., Kip C., Gokcal B., Tuncel A.
JOURNAL OF COLLOID AND INTERFACE SCIENCE, vol.550, pp.90-98, 2019 (SCI-Expanded)
- XVII. **Ni(II)-decorated porous titania microspheres as a stationary phase for column chromatography applications: Highly selective purification of hemoglobin from human blood**
Kip C., Tosun R. B., Alpaslan S., KOÇER İ., Celik E., Tuncel A.
TALANTA, vol.200, pp.100-106, 2019 (SCI-Expanded)
- XVIII. **Ti (IV) attached-phosphonic acid functionalized capillary monolith as a stationary phase for in-syringe-type fast and robust enrichment of phosphopeptides**
Salimi K., Kip C., ÇELİKBIÇAK Ö., Usta D. D., PINAR A., SALİH B., Tuncel A.
BIOMEDICAL CHROMATOGRAPHY, vol.33, no.6, 2019 (SCI-Expanded)
- XIX. **Molecularly imprinted polymeric shell coated monodisperse-porous silica microspheres as a stationary phase for microfluidic boronate affinity chromatography**
Sungu C., Kip C., Tuncel A.
JOURNAL OF SEPARATION SCIENCE, vol.42, no.11, pp.1962-1971, 2019 (SCI-Expanded)
- XX. **In-situ photopolymerized C4-functionalized organosilicon monoliths for reversed-phase protein separation in nano-liquid chromatography**
Kip C., Liu S., Fu X., Tuncel A., Laemmerhofer M.
TALANTA, vol.198, pp.330-336, 2019 (SCI-Expanded)
- XXI. **Isolation of RNA and beta-NAD by phenylboronic acid functionalized, monodisperse-porous silica microspheres as sorbent in batch and microfluidic boronate affinity systems**
Kip C., Gulusur H., Celik E., Usta D. D., Tuncel A.
COLLOIDS AND SURFACES B-BIOINTERFACES, vol.174, pp.333-342, 2019 (SCI-Expanded)
- XXII. **Alkanethiol-functionalized organosilicon monoliths for nano-reversed-phase liquid chromatography**
Demir C., Kip C., Tuncel A.
ELECTROPHORESIS, vol.39, no.22, pp.2919-2928, 2018 (SCI-Expanded)
- XXIII. **Comparative DNA isolation behaviours of silica and polymer based sorbents in batch fashion: monodisperse silica microspheres with bimodal pore size distribution as a new sorbent for DNA isolation**
Gunal G., Kip C., Ogut S. E., İLHAN H., KİBAR G., Tuncel A.
ARTIFICIAL CELLS NANOMEDICINE AND BIOTECHNOLOGY, vol.46, no.1, pp.178-184, 2018 (SCI-Expanded)
- XXIV. **One pot synthesis of carboxyl functionalized-polyhedral oligomeric siloxane based monolith via photoinitiated thiol-methacrylate polymerization for nano-hydrophilic interaction chromatography**
Kip C., Demir C., Tuncel A.
JOURNAL OF CHROMATOGRAPHY A, vol.1502, pp.14-23, 2017 (SCI-Expanded)
- XXV. **Human genomic DNA isolation from whole blood using a simple microfluidic system with silica- and polymer-based stationary phases**

Gunal G., Kip C., Oğut S. E., Usta D. D., ŞENLİK E., Kibar G., Tuncel A.

MATERIALS SCIENCE & ENGINEERING C-MATERIALS FOR BIOLOGICAL APPLICATIONS, vol.74, pp.10-20, 2017 (SCI-Expanded)

- XXVI. **HILIC Stationary Phase Based on Monodisperse-Porous Polymethacrylate Beads Functionalized with Zwitterionic Molecular Brushes**
Kip C., Tuncel A.
CHROMATOGRAPHIA, vol.80, no.4, pp.565-575, 2017 (SCI-Expanded)
- XXVII. **Synthesis of a reactive polymethacrylate capillary monolith and its use as a starting material for the preparation of a stationary phase for hydrophilic interaction chromatography**
Kip C., Erkakan D., Gokaltun A., Celebi B., Tuncel A.
JOURNAL OF CHROMATOGRAPHY A, vol.1396, pp.86-97, 2015 (SCI-Expanded)
- XXVIII. **New vinyl ester-based monoliths as a new stationary phase for capillary electrochromatography**
Kip C., Tuncel A.
ELECTROPHORESIS, vol.36, no.6, pp.945-954, 2015 (SCI-Expanded)
- XXIX. **Butyl methacrylate based monoliths with different cross-linking agents using DMF-aqueous buffer as porogen**
Golgelioğlu C., Tuncel A.
ELECTROPHORESIS, vol.34, no.2, pp.331-342, 2013 (SCI-Expanded)
- XXX. **Aqueous size exclusion chromatography in semimicro and micro-columns by newly synthesized monodisperse macroporous hydrophilic beads as a stationary phase**
Golgelioğlu C., Bayraktar A., CELEBI B., Uguzdoğan E., Tuncel A.
JOURNAL OF CHROMATOGRAPHY A, vol.1224, pp.43-50, 2012 (SCI-Expanded)
- XXXI. **Click-chemistry for surface modification of monodisperse-macroporous particles**
Bayraktar A., Saracoglu B., Golgelioğlu C., Tuncel A.
JOURNAL OF COLLOID AND INTERFACE SCIENCE, vol.365, no.1, pp.63-71, 2012 (SCI-Expanded)
- XXXII. **Polystyrene-Based High Internal Phase Emulsion Polymer Monolithic Stationary Phase for Capillary Electrochromatography**
TUNC Y., Golgelioğlu C., Tuncel A., ULUBAYRAM K.
SEPARATION SCIENCE AND TECHNOLOGY, vol.47, no.16, pp.2444-2449, 2012 (SCI-Expanded)
- XXXIII. **Acrylic-based high internal phase emulsion polymeric monolith for capillary electrochromatography**
TUNC Y., Golgelioğlu C., HASIRCI N., ULUBAYRAM K., Tuncel A.
JOURNAL OF CHROMATOGRAPHY A, vol.1217, no.10, pp.1654-1659, 2010 (SCI-Expanded)
- XXXIV. **Synthesis of Monodisperse Glycerol Dimethacrylate-Based Microgel Particles by Precipitation Polymerization**
Saracoglu B., Uguzdoğan E., Golgelioğlu C., Tuncel A.
INDUSTRIAL & ENGINEERING CHEMISTRY RESEARCH, vol.48, no.10, pp.4844-4851, 2009 (SCI-Expanded)

Articles Published in Other Journals

- I. **A HILIC stationary phase functionalized with glutathione by thiol-ene chemistry on monodisperse-porous polymer microparticles**
KİP F. Ç.
Hacettepe Journal of Biology and Chemistry, 2020 (Peer-Reviewed Journal)

Books & Book Chapters

- I. **Bioaffinity-Based Nanozymes**
KİP F. Ç., HAMALOĞLU K. Ö., TUNCEL S. A.
in: Nanozymes : Advances and Applications, Sundaram Gunasekaran, Editor, CRC Press, Boca Raton, pp.97-113,

2021

II. SILICA PARTICLES IN NANO/MICRO SCALES

KİP F. Ç., TUNCEL S. A.

in: Particulate Technology and Applications, Ali Tuncel, Handan Yavuz, Editor, Hacettepe Üniversitesi Yayınları, pp.31-75, 2019

Refereed Congress / Symposium Publications in Proceedings

- I. **Monodisperse-porous metal oxide microspheres with peroxidase/oxidase mimetic activity as a new tool for biomolecule determination**
Gökçal B., ÖĞÜT S. E., Babacan R., KİP F. Ç., HAMALOĞLU K. Ö., TUNCEL S. A.
XXVII.Balkan Clinical LaboratoryFederation Meeting and XXX.National Congress of theTurkish Biochemical SocietyTBS 2019, 27 - 31 October 2019
- II. **A microfluidic system based on an organosilicon monolith for affinity separation of histidine tagged proteins**
Koçer İ., Kip F. Ç., Çelik Akdur E., Tuncel S. A., Çambay F.
ISC, 32nd International Symposium on Chromatography, Cannes, France, 23 - 27 September 2018, pp.1-2
- III. **Phosphopeptide enrichment via immobilized metal affinity chromatography using phosphonic acid functionalized capillary monolith as a stationary phase in a microfluidic system**
USTA D. D., KİP F. Ç., SALİMİ K., ÇELİKBIÇAK Ö., PINAR A., SALİH B., TUNCEL S. A.
45th International Symposium on High Performance Liquid Phase Separations and Related Techniques., 18 - 22 June 2017
- IV. **Alkanethiol functionalized organosilicon monoliths via one-pot thiol-methacrylate polymerization for nano-reversed phase chromatography**
DEMİR C., KİP F. Ç., KUBAN A., TUNCEL S. A.
45th International Symposium on High Performance Liquid Phase Separations and Related Techniques., 18 - 22 June 2017
- V. **Phosphopeptide enrichment from human-serum via immobilized metal affinity chromatography using phosphonic acid functionalized capillary monolith as a stationary phase in a microfluidic system**
USTA D. D., KİP F. Ç., salimi k., ÇELİKBIÇAK Ö., PINAR A., SALİH B., TUNCEL S. A.
45th International Symposium on High Performance Liquid Phase Separations and Related Techniques(HPLC 2017), 18 - 22 June 2017
- VI. **Phosphopeptide enrichment via immobilized metal affinity chromatography using phosphonic acid functionalized capillary monolith as a stationary phase in a microfluidic system**
USTA D. D., KİP F. Ç., SALİMİ K., ÇELİKBIÇAK Ö., PINAR A., SALİH B., TUNCEL S. A.
HPLC 2017, PRAG, Czech Republic, 11 - 22 June 2017
- VII. **Synthesis and Characterization of Monosized-Porous Titania Beads**
Hamaloğlu K. Ö., Kip F. Ç., Tuncel S. A.
41st International Symposium on High Performance Liquid Phase Separations and Related Techniques, North Carolina, United States Of America, 11 - 14 May 2014, pp.1

Supported Projects

Aydın H. M., Özkaragöz Doğan E., Polat C., KİP F. Ç., BAYRAM C., ÖZTÜRK B. Ö., EROĞLU Ş., TUBITAK Project, New Generation Biomaterial Technologies for Healthy Life Research Network , 2023 - 2027

KİP F. Ç., PARLAK S., Project Supported by Higher Education Institutions, Metal organik kafes yapılarının protein tayini ve izolasyonu için kullanılabilirliğinin incelenmesi, 2022 - 2024

KİP F. Ç., HAMALOĞLU K. Ö., GÜNAN YÜCEL H., TUNCEL S. A., AKSU Z., SAĞ AÇIKEL Y., AYDOĞAN N., ÇELİK AKDUR E.,

ÖNEL S., YÜKSEL ORHAN Ö., et al, Project Supported by Higher Education Institutions, Biyoteknoloji Biyomedikal ve Enerji Uygulamaları için İleri ve Fonksiyonel Malzemelerin Geliştirilmesi, 2022 - 2024

Hamaloğlu K. Ö., Güler E., Kip F. Ç., Kabay N., TUBITAK Project, Ters Elektrodializ ile Tuzluluk Gradyan Enerjisinden Elektrik Enerjisi Üretiminde TekDeğerlikli İyon Seçimli Polimer/MOF Esaslı İyon Değiştirici Membranların Geliştirilmesi, 2022 - 2024

TUNCEL S. A., DEMİR M. C., KİP F. Ç., Project Supported by Higher Education Institutions, Protein tayini için peroksidaz-mikrozim bazlı biyosensör geliştirilmesi, 2019 - 2021

HAMALOĞLU K. Ö., TUNCEL S. A., KİP F. Ç., Ulu S., Babacan Tosun R., Project Supported by Higher Education Institutions, İridyum veya Rutenyum Aktif Merkez İçeren Gözenekli Oksidasyon Katalizörlerinin Sentezi ve Sentezlenen Katalizörlerin Su Oksidasyonunda Kullanılabilirliğinin İncelenmesi, 2018 - 2020

KİP F. Ç., TUNCEL S. A., ÇELİKBIÇAK Ö., Project Supported by Higher Education Institutions, Yeni bir erken evre tümör belirtecinin moleküler baskılama ve LC-MS/MS kullanılarak geliştirilmesi, 2017 - 2019

KİP F. Ç., Project Supported by Higher Education Institutions, Fonksiyonel gruplu ayırma ortamlarının geliştirilmesi ve kromatografik performanslarının incelenmesi, 2017 - 2018

KİP F. Ç., TUNCEL S. A., Project Supported by Higher Education Institutions, Hidrofilik etkileşim kromatografisi için tiyolen reaksiyonu ile hidrofilik ligand bağlı eşboyutlu gözenekli poli(TMSPM-co-EDMA) partikül dolgulı mikrokolonların geliştirilmesi, 2016 - 2018

KİP F. Ç., TUNCEL S. A., Project Supported by Higher Education Institutions, Immobilize metal affinite mikro kromatografisi için fosforik asitle işlevselleştirilmiş lantanit iyonları taşıyan polimetakrilat bazlı monolitlerin sentezi, 2016 - 2016

KİP F. Ç., TUNCEL S. A., Project Supported by Higher Education Institutions, Organik kirleticilerden 4-nitrofenolün fotokatalitik dekompozisyonu için manyetik fotokatalizörlerin geliştirilmesi, 2015 - 2016

KİP F. Ç., TUNCEL S. A., Project Supported by Higher Education Institutions, Kapiler elektrokromatografide nötral ve polar analitlerin kromatografik ayrımı için polimetakrilat bazlı monolitlerin sentezi, 2015 - 2015

Metrics

Publication: 46
Citation (WoS): 337
Citation (Scopus): 263
H-Index (WoS): 13
H-Index (Scopus): 10

Awards

Kip F. Ç., Hacettepe University "Scientific Encouragement Award", Hacettepe Üniversitesi, June 2020