

# Prof. NİLAY BERELİ

## Personal Information

**Office Phone:** [+90 312 297 7963](tel:+903122977963)

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

**Web:** <https://avesis.hacettepe.edu.tr/bereli>

**Address:** Hacettepe Üniversitesi, Fen Fakültesi, Kimya Bölümü Beytepe Kampüsü 06532 Çankaya-ANKARA

## International Researcher IDs

ORCID: 0000-0001-8178-0755

Yoksis Researcher ID: 104368

## Education Information

Doctorate, Hacettepe University, Fen Bilimleri Enstitüsü, Kimya, Turkey 2005 - 2010

Postgraduate, Hacettepe University, Fen Bilimleri Enstitüsü, Kimya, Turkey 2003 - 2005

Undergraduate, Hacettepe University, Fen Fakültesi, Kimya, Turkey 1997 - 2003

## Dissertations

Doctorate, Monoklonal Antibadi Saflaştırılması İçin Eşboyutlu Manyetik Partiküllerin Hazırlanması, Hacettepe Üniversitesi, Fen Bilimleri Enstitüsü, Kimya (Dr), 2010

Postgraduate, Antibadi Saflaştırılması İçin Monolitik Çubukların Tasarımı, Hacettepe Üniversitesi, Fen Bilimleri Enstitüsü, Kimya (YI) (Tezli), 2005

## Research Areas

Bioprocess Separation Processes, Polymer Technology, Biosensor, Chemistry, Sensors, Biochemistry, Amino Acids, Biosynthesis, Protein Chemistry, Natural Sciences

## Academic Titles / Tasks

Professor, Hacettepe University, Fen Fakültesi, Kimya Bölümü, 2022 - Continues

Associate Professor, Hacettepe University, Fen Fakültesi, Kimya Bölümü, 2015 - 2022

Expert, Hacettepe University, Fen Fakültesi, Kimya Bölümü, 2008 - 2015

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

- An electrochemical sensor based on carbon nanofiber and molecular imprinting strategy for dasatinib recognition**  
Yıldız E., Cetinkaya A., Çorman M. E., Atici E. B., UZUN L., ÖZKAN S. A.  
Bioelectrochemistry, vol.158, 2024 (SCI-Expanded)
- Preparation of cryogel columns for depletion of hemoglobin from human blood**  
Derazshamshir A., Baydemir G., Yılmaz F., BERELİ N., DENİZLİ A.

- ARTIFICIAL CELLS NANOMEDICINE AND BIOTECHNOLOGY, vol.44, no.3, pp.792-799, 2016 (SCI-Expanded)
- III. **[PHEMA/PEI]-Cu(II) based immobilized metal affinity chromatography cryogels: Application on the separation of IgG from human plasma**  
Bakhshpour M., Derazshamshir A., BERELİ N., Elkak A., DENİZLİ A.  
MATERIALS SCIENCE & ENGINEERING C-MATERIALS FOR BIOLOGICAL APPLICATIONS, vol.61, pp.824-831, 2016 (SCI-Expanded)
- IV. **Superior magnetic monodisperse particles for direct purification of immunoglobulin G under magnetic field**  
BERELİ N., DENİZLİ A.  
JOURNAL OF MACROMOLECULAR SCIENCE PART A-PURE AND APPLIED CHEMISTRY, vol.53, no.3, pp.160-168, 2016 (SCI-Expanded)
- V. **Megaporous poly(hydroxy ethylmethacrylate) based poly(glycidylmethacrylate-N-methacryloyl-(L)-tryptophan) embedded composite cryogel**  
TÜRKMEN D., BERELİ N., Derazshamshir A., Percin I., SHAIKH H., Yilmaz F.  
COLLOIDS AND SURFACES B-BIOINTERFACES, vol.130, pp.61-68, 2015 (SCI-Expanded)
- VI. **Comparison of Two Different Reactive Dye Immobilized Poly(Hydroxyethyl Methacrylate) Cryogel Discs for Purification of Lysozyme**  
PERÇİN DEMİRÇELİK I., ŞENER G., Dmirçelik A. H., BERELİ N., DENİZLİ A.  
APPLIED BIOCHEMISTRY AND BIOTECHNOLOGY, vol.175, no.6, pp.2795-2805, 2015 (SCI-Expanded)
- VII. **Cryogels for Affinity Chromatography**  
BERELİ N., TÜRKMEN D., Yavuz H., Galaev I. Y., DENİZLİ A.  
ADVANCED SEPARATIONS BY SPECIALIZED SORBENTS, vol.108, pp.39-67, 2015 (SCI-Expanded)
- VIII. **Molecular imprinted magnetic nanoparticles for controlled delivery of mitomycin C**  
TÜRKMEN D., BERELİ N., CORMAN M. E., SHAIKH H., AKGÖL S., DENİZLİ A.  
ARTIFICIAL CELLS NANOMEDICINE AND BIOTECHNOLOGY, vol.42, no.5, pp.316-322, 2014 (SCI-Expanded)
- IX. **Molecularly Imprinted Supermacroporous Cryogels for Myoglobin Recognition**  
Erturk G., BERELİ N., Ramteke P. W., DENİZLİ A.  
APPLIED BIOCHEMISTRY AND BIOTECHNOLOGY, vol.173, no.5, pp.1250-1262, 2014 (SCI-Expanded)
- X. **Aspartic acid incorporated monolithic columns for affinity glycoprotein purification**  
Armutcu C., BERELİ N., Bayram E., UZUN L., Say R., DENİZLİ A.  
COLLOIDS AND SURFACES B-BIOINTERFACES, vol.114, pp.67-74, 2014 (SCI-Expanded)
- XI. **Preparation and characterization of thiophilic cryogels with 2-mercapto ethanol as the ligand for IgG purification**  
BAKHSPOUR M., BERELİ N., ŞENEL S.  
COLLOIDS AND SURFACES B-BIOINTERFACES, vol.113, pp.261-268, 2014 (SCI-Expanded)
- XII. **Monolithic Boronate Affinity Columns for IgG Separation**  
SAYLAN Y., BERELİ N., UZUN L., DENİZLİ A.  
SEPARATION SCIENCE AND TECHNOLOGY, vol.49, no.10, pp.1555-1565, 2014 (SCI-Expanded)
- XIII. **Molecularly imprinted cryogels for human interferon-alpha purification from human gingival fibroblast culture**  
Erturk G., BERELİ N., Tumer M. A., Say R., DENİZLİ A.  
JOURNAL OF MOLECULAR RECOGNITION, vol.26, no.12, pp.633-642, 2013 (SCI-Expanded)
- XIV. **Hydrophobic cryogels for DNA adsorption: Effect of embedding of monosize microbeads into cryogel network on their adsorptive performances**  
CORMAN M. E., BERELİ N., Ozkara S., UZUN L., DENİZLİ A.  
BIOMEDICAL CHROMATOGRAPHY, vol.27, no.11, pp.1524-1531, 2013 (SCI-Expanded)
- XV. **Oriented immobilized anti-hIgG via Fc fragment-imprinted PHEMA cryogel for IgG purification**  
BERELİ N., Erturk G., Tumer M. A., Say R., DENİZLİ A.  
BIOMEDICAL CHROMATOGRAPHY, vol.27, no.5, pp.599-607, 2013 (SCI-Expanded)
- XVI. **Glutamic acid containing supermacroporous poly( hydroxyethyl methacrylate) cryogel disks for UO<sub>2</sub><sup>2+</sup> removal**

- BERELİ N., TÜRKMEN D., KOSE K., DENİZLİ A.  
MATERIALS SCIENCE & ENGINEERING C-MATERIALS FOR BIOLOGICAL APPLICATIONS, vol.32, no.7, pp.2052-2059,  
2012 (SCI-Expanded)
- XVII. **Antibody Purification from Human Plasma by Metal-Chelated Affinity Membranes**  
Yavuz H., BERELİ N., Armutcu C., Yilmaz F., DENİZLİ A.  
JOURNAL OF APPLIED POLYMER SCIENCE, vol.123, no.6, pp.3476-3484, 2012 (SCI-Expanded)
- XVIII. **Histidine Containing Macroporous Affinity Cryogels for Immunoglobulin G Purification**  
BERELİ N., Erturk G., DENİZLİ A.  
SEPARATION SCIENCE AND TECHNOLOGY, vol.47, no.12, pp.1813-1820, 2012 (SCI-Expanded)
- XIX. **Molecularly imprinted supermacroporous cryogels for cytochrome c recognition**  
TAMAHKAR E., BERELİ N., Say R., DENİZLİ A.  
JOURNAL OF SEPARATION SCIENCE, vol.34, no.23, pp.3433-3440, 2011 (SCI-Expanded)
- XX. **L-Histidine imprinted supermacroporous cryogels for protein recognition**  
BERELİ N., SAYLAN Y., UZUN L., Say R., DENİZLİ A.  
SEPARATION AND PURIFICATION TECHNOLOGY, vol.82, pp.28-35, 2011 (SCI-Expanded)
- XXI. **PHEMA cryogel for in-vitro removal of anti-dsDNA antibodies from SLE plasma**  
ÖZGÜR E., BERELİ N., TÜRKMEN D., ÜNAL S., DENİZLİ A.  
MATERIALS SCIENCE & ENGINEERING C-MATERIALS FOR BIOLOGICAL APPLICATIONS, vol.31, no.5, pp.915-920,  
2011 (SCI-Expanded)
- XXII. **Oriented immobilized anti-LDL antibody carrying poly(hydroxyethyl methacrylate) cryogel for cholesterol removal from human plasma**  
BERELİ N., Sener G., Yavuz H., DENİZLİ A.  
MATERIALS SCIENCE & ENGINEERING C-MATERIALS FOR BIOLOGICAL APPLICATIONS, vol.31, no.5, pp.1078-1083,  
2011 (SCI-Expanded)
- XXIII. **Monosize microbeads for pseudo-affinity adsorption of human insulin**  
SARI M. M., Armutcu C., BERELİ N., UZUN L., DENİZLİ A.  
COLLOIDS AND SURFACES B-BIOINTERFACES, vol.84, no.1, pp.140-147, 2011 (SCI-Expanded)
- XXIV. **Reactive Green HE-4BD Functionalized Supermacroporous Poly(hydroxyethyl methacrylate) Cryogel for Heavy Metal Removal**  
Arpa Ç., BERELİ N., OZDIL E., Bektas S., DENİZLİ A.  
JOURNAL OF APPLIED POLYMER SCIENCE, vol.118, no.4, pp.2208-2215, 2010 (SCI-Expanded)
- XXV. **Selective removal of the autoantibodies from rheumatoid arthritis patient plasma using protein A carrying affinity cryogels**  
Alkan H., BERELİ N., Baysal Z., DENİZLİ A.  
BIOCHEMICAL ENGINEERING JOURNAL, vol.51, no.3, pp.153-159, 2010 (SCI-Expanded)
- XXVI. **Ion-imprinted supermacroporous cryogel, for in vitro removal of iron out of human plasma with beta thalassemia**  
Asliyuca S., BERELİ N., UZUN L., ONUR M. A., Say R., DENİZLİ A.  
SEPARATION AND PURIFICATION TECHNOLOGY, vol.73, no.2, pp.243-249, 2010 (SCI-Expanded)
- XXVII. **Preparation of nanoparticles which contains histidine for immobilization of Trametes versicolor laccase**  
Corman M. E., Oeztuerk N., BERELİ N., Akgoel S., DENİZLİ A.  
JOURNAL OF MOLECULAR CATALYSIS B-ENZYMATIC, vol.63, pp.102-107, 2010 (SCI-Expanded)
- XXVIII. **Poly(glycidyl methacrylate) beads embedded cryogels for pseudo-specific affinity depletion of albumin and immunoglobulin G**  
BERELİ N., SENER G., ALTINTAS E. B., Yavuz H., DENİZLİ A.  
MATERIALS SCIENCE & ENGINEERING C-MATERIALS FOR BIOLOGICAL APPLICATIONS, vol.30, no.2, pp.323-329,  
2010 (SCI-Expanded)
- XXIX. **Highly selective ion-imprinted particles for solid-phase extraction of Pb<sup>2+</sup> ions**  
Esen C., Andac M., BERELİ N., Say R., Henden E., DENİZLİ A.  
MATERIALS SCIENCE & ENGINEERING C-MATERIALS FOR BIOLOGICAL APPLICATIONS, vol.29, no.8, pp.2464-2470,

- 2009 (SCI-Expanded)
- XXX. **Antibody purification with protein A attached supermacroporous poly(hydroxyethyl methacrylate) cryogel**  
Alkan H., BERELİ N., Baysal Z., DENİZLİ A.  
BIOCHEMICAL ENGINEERING JOURNAL, vol.45, no.3, pp.201-208, 2009 (SCI-Expanded)
- XXXI. **Supermacroporous hydrophobic affinity cryogels for protein chromatography**  
YILMAZ F., BERELİ N., Yavuz H., DENİZLİ A.  
BIOCHEMICAL ENGINEERING JOURNAL, vol.43, no.3, pp.272-279, 2009 (SCI-Expanded)
- XXXII. **Supermacroporous poly(hydroxyethyl methacrylate) based cryogel with embedded bilirubin imprinted particles**  
BAYDEMİR G., BERELİ N., Andac M., Say R., Galaev I. Y., DENİZLİ A.  
REACTIVE & FUNCTIONAL POLYMERS, vol.69, no.1, pp.36-42, 2009 (SCI-Expanded)
- XXXIII. **Bilirubin recognition via molecularly imprinted supermacroporous cryogels**  
BAYDEMİR G., BERELİ N., Andac M., Say R., Galaev I. Y., DENİZLİ A.  
COLLOIDS AND SURFACES B-BIOINTERFACES, vol.68, no.1, pp.33-38, 2009 (SCI-Expanded)
- XXXIV. **High capacity binding of antibodies by poly(hydroxyethyl methacrylate) nanoparticles**  
Oeztuerk N., BERELİ N., Akgoel S., DENİZLİ A.  
COLLOIDS AND SURFACES B-BIOINTERFACES, vol.67, no.1, pp.14-19, 2008 (SCI-Expanded)
- XXXV. **Protein recognition via ion-coordinated molecularly imprinted supermacroporous cryogels**  
BERELİ N., Andac M., BAYDEMİR G., Say R., Galaev I. Y., DENİZLİ A.  
JOURNAL OF CHROMATOGRAPHY A, vol.1190, no.1-2, pp.18-26, 2008 (SCI-Expanded)
- XXXVI. **Selective removal of bilirubin from human plasma with bilirubin-imprinted particles**  
BAYDEMİR G., Andac M., Bereli N., SAY R., Denizli A.  
INDUSTRIAL & ENGINEERING CHEMISTRY RESEARCH, vol.46, no.9, pp.2843-2852, 2007 (SCI-Expanded)
- XXXVII. **Antibody purification using porous metal-chelated monolithic columns**  
Bereli N., Uzun L., Yavuz H., Elkak A., Denizli A.  
JOURNAL OF APPLIED POLYMER SCIENCE, vol.101, no.1, pp.395-404, 2006 (SCI-Expanded)
- XXXVIII. **Magnetic dye affinity beads for the adsorption of beta-casein**  
AKGOL S., Bereli N., DENIZLI A.  
MACROMOLECULAR BIOSCIENCE, vol.5, no.8, pp.786-794, 2005 (SCI-Expanded)
- XXXIX. **Antibody purification by concanavalin a affinity chromatography**  
BERELI N., AKGOL S., Yavuz H., DENIZLI A.  
JOURNAL OF APPLIED POLYMER SCIENCE, vol.97, no.3, pp.1202-1208, 2005 (SCI-Expanded)
- XL. **Synthesis of poly[(hydroxyethyl methacrylate)-co-(methacrylamidoalanine)] membranes and their utilization as an affinity sorbent for lysozyme adsorption**  
GARIPCAN B., Bereli N., PATIR S., ARICA Y., DENIZLI A.  
MACROMOLECULAR BIOSCIENCE, vol.1, no.8, pp.332-340, 2001 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Synthesis and Characterization of Poly N isopropylacrylamide Thermosensitive Based Cryogel**  
Veyis K., TÜRKMEN D., Huma S., BERELİ N., DENİZLİ A.  
Hacettepe Journal of Biology and Chemistry, vol.41, pp.159-166, 2013 (Peer-Reviewed Journal)
- II. **Affinity Separation and Characterization of IgG Subfragments by Fast Protein Liquid Chromatography with HiTrap\_r Protein A Column**  
ERTÜRK G., BERELİ N., UZUN L., TÜMER M. A.  
HACETTEPE JOURNAL OF BIOLOGY AND CHEMISTRY, vol.39, no.2, pp.133-138, 2011 (Peer-Reviewed Journal)
- III. **Supermacroporous Support Having Dye for Reuseable Enzyme Immobilization**  
TÜZMEN M. N., BERELİ N., ANDAÇ ÖZDİL A. M., AKGÖL S., DENİZLİ A.  
HACETTEPE JOURNAL OF BIOLOGY AND CHEMISTRY, vol.36, pp.9-19, 2008 (Peer-Reviewed Journal)

## Books & Book Chapters

### I. Plasmonic nanosensors for chemical warfare agents

AKGÖNÜLLÜ S., ÇALIŞIR M., Özbek M. A., Erkek M., BERELİ N., DENİZLİ A.

in: Sensing of Deadly Toxic Chemical Warfare Agents, Nerve Agent Simulants, and their Toxicological Aspects, Sangita Das, Partha Pratim Das, Sabu Thomas, Editor, Elsevier, pp.81-96, 2023

## Refereed Congress / Symposium Publications in Proceedings

### I. Saccharomyces cerevisiae'den Malat Dehidrogenaz Saflaştırılması için Biya-Afinite Kriyojel Diskler

Hamade A., BERELİ N., TOPÇU A. A., TÜRKMEN D., Elkak A., DENİZLİ A.

11. Ulusal Afinite Teknikleri Kongresi, Aydın, Turkey, 15 June - 17 July 2017

## Supported Projects

BERELİ N., Project Supported by Higher Education Institutions, Düşük Molekül Ağırlıklı Heparin Takılı PHEMA Kriyojel ile Albumin Saflaştırılması, 2014 - Continues

DENİZLİ A., BERELİ N., ÇİMEN D., Project Supported by Higher Education Institutions, İçeceklerde Bulunan Gıda Boyar Maddelerin Tayinine Yönelik Sensörlerin Hazırlanması, 2018 - 2019

ÇİMEN D., DENİZLİ A., BERELİ N., Project Supported by Higher Education Institutions, Hayvansal Gıdalarda Testosteron Tayinine Yönelik Yüze Plazmon Rezonans (SPR) Biosensörlerin Hazırlanması, 2018 - 2019

TÜRKMEN D., Akgönüllü S., BERELİ N., Project Supported by Higher Education Institutions, Melamin Baskılanmış Polimerik Kartuşlar, 2017 - 2019

BERELİ N., Project Supported by Higher Education Institutions, Bilirubin Adsorpsiyonu İçin Polimerik Kolonların Hazırlanması, 2017 - 2019

DENİZLİ A., YAVUZ ALAGÖZ H., BERELİ N., TÜRKMEN D., Project Supported by Higher Education Institutions, Diklofenak Baskılanmış Sensörlerin Hazırlanması ve Diklofenak Tayininde Kullanımının Araştırılması, 2017 - 2019

BERELİ N., Project Supported by Higher Education Institutions, Gıda Ürünlerinde Amoksisilin Analizi İçin Plazmonik Nanosensörlerin Hazırlanması, 2016 - 2018

BERELİ N., DENİZLİ A., TÜRKMEN D., Project Supported by Higher Education Institutions, Histidin Miktarının Tayinine Yönelik Kuvars Kristal Mikrotorazi QCM Biyosensörlerin Hazırlanması, 2017 - 2017

BERELİ N., Project Supported by Higher Education Institutions, Antibadi Saflaştırılması, 2017 - 2017

BERELİ N., Project Supported by Higher Education Institutions, Kolesterol Uzaklaştırılması için Heparin İmmobilize Süpermakrogözenekli Monolitik Kriyojellerin Hazırlanması, 2016 - 2017

BERELİ N., DENİZLİ A., ÇİMEN D., Project Supported by Higher Education Institutions, RİBOFLAVİN VİTAMİN B2 TAYİNİ İÇİN YÜZEY PLAZMON REZONANS SPR TEMELLİ NANOSENSÖRLERİN HAZIRLANMASI, 2015 - 2017

BERELİ N., Project Supported by Higher Education Institutions, İmmunoglobulin G Saflaştırılması için Aktive Edilmiş Sefaroz Küreler ile Poli(2-hidroksietil metakrilat) Kompozit Kriyojellerin Hazırlanması, 2016 - 2016

DENİZLİ A., BERELİ N., Project Supported by Higher Education Institutions, PROTEİN C SAFLAŞTIRILMASI İÇİN MOLEKÜLER BASKILANMIŞ ADSORBENTLER, 2015 - 2016

BERELİ N., YILMAZ E., KARTAL F., ÇİMEN D., Project Supported by Higher Education Institutions, İnsülin Tayinine Yönelik Kuartz Kristal Mikrobals (QCM) Biyosensörlerin Hazırlanması, 2015 - 2016

BERELİ N., Project Supported by Higher Education Institutions, Şap Aşısı Kalitesinin Arttırılması İçin Şap Virüsü 146S Partikülü Baskılanmış Kriyojel Kolonların Hazırlanması, 2013 - 2016

BERELİ N., DENİZLİ A., ÇİMEN D., Project Supported by Higher Education Institutions, PROTEİN C SAFLAŞTIRILMASI İÇİN MANYETİK NANOPARTİKÜLLER, 2015 - 2015

BERELİ N., Project Supported by Higher Education Institutions, Konkanavalin A Baskılanmış Süpermakrogözenekli Poli(Hidroksietil metakrilat) Kriyojeller, 2015 - 2015

## **Metrics**

Publication: 104

Citation (WoS): 1693

Citation (Scopus): 2155

H-Index (WoS): 25

H-Index (Scopus): 27

## **Awards**

BERELİ N., 2017 Bilim Teşvik Ödülü, Hacettepe Üniversitesi, October 2018