

Prof. Nurgül Çelik Balcı

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International Researcher IDs

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Education Information

Doctorate, Istanbul Technical University, Fen Bilimleri Enstitüsü, Jeoloji Mühendisliği (Dr), Turkey 2000 - 2005

Foreign Languages

English

Dissertations

Doctorate, Assessment of biogeochemical influence on metal sulfide and Fe (II) oxidation as inferred from oxygen, sulfur and Fe isotopes, İstanbul Teknik Üniversitesi, Fen Bilimleri Enstitüsü, Jeoloji Mühendisliği (Dr), 2005

Research Areas

Technical Sciences, Geological Engineering, General Geology, Geoarcheology, Geology, Ore Deposits-Geochemistry, Geochemistry (Organic and Inorganic, Medical (Medical) Geochemistry, Applied Geochemistry, Basic Sciences, Life Sciences, Biochemistry, Molecular Biology and Genetics

Academic Titles / Tasks

Professor, Istanbul Technical University, Maden, Jeoloji Mühendisliği, 1997 - Continues

Courses

Geochemistry , Undergraduate, 2017 - 2018

Selected topics in Geochemistry, Postgraduate, 2017 - 2018

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **S and O isotope ratios of sulfate suggest enhanced monosulfides oxidation in a historical Pb-Zn mine site**
Çelik Balcı N., Güneş Y., Sekerci F., Sari E.
APPLIED GEOCHEMISTRY, vol.132, 2021 (SCI-Expanded)
- II. **Source and distribution of pyrite and inorganic sulfur isotopes in the Saray and Pinarhisar Coalfields, North Thrace Basin, Turkey**
Erarslan C., Örgün Tutay Y., Çelik Balcı N.
INTERNATIONAL JOURNAL OF COAL GEOLOGY, vol.227, 2020 (SCI-Expanded)
- III. **Biotic and Abiotic Imprints on Mg-Rich Stromatolites: Lessons from Lake Salda, SW Turkey**
Çelik Balcı N., Güneş Y., Kaiser J., ÖN S. A., Eris K. K., Garczynski B., Horgan B. H. N.
Geomicrobiology Journal, vol.37, no.5, pp.401-425, 2020 (SCI-Expanded)
- IV. **Recombinant production and characterization of a novel esterase from a hypersaline lake, Acigol, by metagenomic approach**
Tütüncü H. E., Çelik Balcı N., Tüter M., Gül Karagüler N.
EXTREMOPHILES, vol.23, no.5, pp.507-520, 2019 (SCI-Expanded)
- V. **A modeling approach for calcium carbonate precipitation in a hypersaline environment: A case study from a shallow, alkaline lake**
Karami F., Çelik Balcı N., GÜVEN B.
ECOLOGICAL COMPLEXITY, vol.39, 2019 (SCI-Expanded)
- VI. **Evaluating abiotic and microbial factors on carbonate precipitation in Lake Acigol, a hypersaline lake in Southwestern Turkey**
Balci N., Demirel C., On S. A., Gültekin A., Kurt M. A.
QUATERNARY INTERNATIONAL, vol.486, pp.116-128, 2018 (SCI-Expanded)
- VII. **Geochemical characteristics of sedimentary manganese deposits of Binkılıç, Trache Basin, Turkey**
Gültekin A. H., Çelik Balcı N.
NEW ZEALAND JOURNAL OF GEOLOGY AND GEOPHYSICS, vol.7, no.3, pp.1-13, 2018 (SCI-Expanded)
- VIII. **Prediction of Acid Mine Drainage (AMD) and Metal Release Sources at the Kure Copper Mine Site, Kastamonu, NW Turkey**
Çelik Balcı N., Demirel C.
MINE WATER AND THE ENVIRONMENT, vol.37, no.1, pp.56-74, 2018 (SCI-Expanded)
- IX. **Tetrathionate and Elemental Sulfur Shape the Isotope Composition of Sulfate in Acid Mine Drainage**
Balci N., Brunner B., Turchyn A. V.
FRONTIERS IN MICROBIOLOGY, vol.8, 2017 (SCI-Expanded)
- X. **Prediction of Acid Mine Drainage (AMD) and Metal Release Sources at the Küre Copper Mine Site, Kastamonu, NW Turkey**
Çelik Balcı N.
MINE WATER AND THE ENVIRONMENT, vol.33, no.109, pp.1-19, 2017 (SCI-Expanded)
- XI. **Generation of Acid Mine Lakes Associated with Abandoned Coal Mines in Northwest Turkey**
Sanhyuksel d., Çelik Balcı N., Baba A.
Archives of environmental contamination and toxicology, vol.70, no.4, pp.757-782, 2016 (SCI-Expanded)
- XII. **Formation of Carbonate Nanoglobules by a Mixed Natural Culture under Hypersaline Conditions**
Çelik Balcı N., Demirel C.
Minerals, vol.0, 2016 (SCI-Expanded)
- XIII. **Reproducing Authigenic Carbonate Precipitation in the Hypersaline Lake Acgol (Turkey) with Microbial Cultures**
Balci N., MENEKSE M., Karaguler N. G., Sönmez M. Ş., Meister P.
GEOMICROBIOLOGY JOURNAL, vol.33, no.9, pp.758-773, 2016 (SCI-Expanded)
- XIV. **Function Based Metagenomics Approach for Obtaining Lipase from Acid Mine Drainage Site**
Çelik Balcı N.
ARCHIVES OF BIOCHEMISTRY AND BIOPHYSICS, vol.2, pp.1-21, 2016 (SCI-Expanded)
- XV. **Mineralogy Geochemistry and Fluid Inclusion Data from the Tumanpınarı Volcanic Rock Hosted Fe**

Mn Ba Deposit Balıkesir Dursunbey Turkey

GÜLTEKİN A. H., Çelik Balcı N.

Minerals, vol.6, no.4, pp.120-0, 2016 (SCI-Expanded)

- XVI. **Direct Bioelectroanalysis at the interfaces by genetically engineered dehydrogenase**
ÇELİK BALCI N., MENEKŞE KILIÇ M., Gül-karagüler N., SÖNMEZ M. Ş., Pa M.
BIOINSPIRED BIOMIMETIC AND NANOBIOMATERIALS, vol.0, 2014 (SCI-Expanded)
- XVII. **Distribution and Contamination of Heavy Metals in the Surface Sediments of Ambarli Port Area Istanbul Turkey**
Çelik Balcı N., SARI E., ÜNLÜ V. S., APAK M. R., KOLDEMİR B.
EKOLOJİ, vol.23, no.90, pp.1-9, 2014 (SCI-Expanded)
- XVIII. **Evaluation of Contamination by Selected Elements in a Turkish Port**
SARI E., ÜNLÜ V. S., Çelik Balcı N., APAK M. R., KOLDEMİR B., KURT M. A.
POLISH JOURNAL OF ENVIRONMENTAL STUDIES, vol.22, no.3, pp.841-847, 2013 (SCI-Expanded)
- XIX. **A double mutant of highly purified Geobacillus stearothermophilus lactate dehydrogenase recognises L mandelic acid as a substrate**
ÇELİK BALCI N., MENEKŞE KILIÇ M., Gül-karagüler N., SÖNMEZ M. Ş., Pa M.
Enzyme and Microbial Technology, vol.0, 2013 (SCI-Expanded)
- XX. **Mercury distribution in the sediments of Ambarli Port Area Sea of Marmara Turkey**
SARI E., ÜNLÜ V. S., Çelik Balcı N., APAK M. R., KOLDEMİR B., KURT M. A.
chemistry and Ecology, vol.29, no.1, pp.28-43, 2013 (SCI-Expanded)
- XXI. **Bacterial community composition of sediments from Artificial Lake Maslak Istanbul Turkey**
Çelik Balcı N., Nurcan V., Emrah Y., GÜL-KARAGÜLER N.
ENVIRONMENTAL MONITORING AND ASSESSMENT, vol.184, no.9, pp.5641-5650, 2012 (SCI-Expanded)
- XXII. **Oxygen and sulfur isotope systematics of sulfate produced during abiotic and bacterial oxidation of sphalerite and elemental sulfur**
Çelik Balcı N., Bernhard M., Pat S., Kevin M.
GEOCHIMICA ET COSMOCHIMICA ACTA, vol.77, pp.335-351, 2012 (SCI-Expanded)
- XXIII. **The effect of methionine to cysteine substitution on the stability of formate dehydrogenase from Candida methylica**
ÇELİK BALCI N., MENEKŞE KILIÇ M., Gül-karagüler N., SÖNMEZ M. Ş., Pa M.
Journal of Molecular Catalysis B-Enzymatic, vol.0, 2012 (SCI-Expanded)
- XXIV. **Improved Candida Methylica Formate Dehydrogenase Fermentation Through Statistical Optimization Of Low Cost Culture Media**
ÇELİK BALCI N., MENEKŞE KILIÇ M., Gül-karagüler N., SÖNMEZ M. Ş., Pa M.
Preparative Biochemistry & Biotechnology, vol.0, 2012 (SCI-Expanded)
- XXV. **Bacterial community composition of sediments from Artificial Lake Maslak**
ÇELİK BALCI N., MENEKŞE KILIÇ M., Gül-karagüler N., SÖNMEZ M. Ş., Pa M.
Environmental Monitoring and Assessment, vol.0, 2012 (SCI-Expanded)
- XXVI. **Kinetic oxygen isotope effects during dissimilatory sulfate reduction A combined theoretical and experimental approach**
Alexandra T., Çelik Balcı N., Volker B., Timothy L., Benjamin B.
GEOCHIMICA ET COSMOCHIMICA ACTA, vol.74, no.7, pp.2011-2024, 2010 (SCI-Expanded)
- XXVII. **Oxygen and sulfur isotope systematics of sulfate produced by bacterial and abiotic oxidation of pyrite**
Çelik Balcı N., Pat S., Kevin M., Kerstin L.
Geochimica et cosmochimica, vol.71, no.15, pp.3796-3811, 2007 (SSCI)
- XXVIII. **Iron isotope fractionation during microbially stimulated Fe II oxidation and Fe III precipitation**
Çelik Balcı N., Pat S., Kevin M., Kerstin L.
Geochimica et cosmochimica, vol.70, no.3, pp.622-639, 2006 (SSCI)
- XXIX. **Mineral chemistry of barium and titanium bearing biotites in calc alkaline volcanic rocks from the Mezitler area Balıkesir Dursunbey western Turkey**

YAVUZ F., Gültekin A. H., ÖRGÜN TUTAY Y., ÇELİK BALCI N., ÇELİK KARAKAYA M., ŞAŞMAZ A.

GEOCHEMICAL JOURNAL, vol.36, pp.563-580, 2002 (SCI-Expanded)

XXX. **Role of glutamate 52 in the mechanism of L lactate dehydrogenase from bacillus stearothermophilus**

ÇELİK BALCI N., MENEKŞE KILIÇ M., Gül-karagüler N., SÖNMEZ M. Ş., Pa M.

BIOTECHNOLOGY LETTERS, vol.0, 2001 (SCI-Expanded)

Articles Published in Other Journals

- I. **Optimization of Recombinant Novel Esterase Expression from Extremophiles**
TÜTÜNCÜ H. E., ÇELİK BALCI N., TÜTER M., GÜL-KARAGÜLER N.
Journal of Applied Biological Sciences, vol.12, no.3, pp.33-36, 2018 (Scopus)
- II. **Salda Gölünün Jeomikrobiyolojisi ve Güncel Stromatolit Oluşumunda Mikrobiyal Etkiler**
Çelik Balcı N., Demirel C., Kurt M. A.
Yerbilimleri, vol.39, no.1, pp.19-39, 2018 (Scopus)
- III. **Geochemical Characteristics of Sedimentary Manganese Deposit of Binkılıç, Trache Basin, Turkey**
GÜLTEKİN A. H., ÇELİK BALCI N.
Journal of Geology Geophysics, vol.7, no.3, pp.3-13, 2018 (Peer-Reviewed Journal)
- IV. **Function Based Metagenomics Approach for Obtaining Lipase from Acid Mine Drainage Site**
TÜTÜNCÜ H. E., ÇELİK BALCI N., TÜTER M., GÜL-KARAGÜLER N., Oztug M.
International Journal Series in Engineering Science (IJSES), vol.3, pp.1-20, 2017 (Peer-Reviewed Journal)
- V. **Geochemical characteristics of Coal from Thrace Region, NW Turkey**
Örgün Tutay Y., Çelik Balcı N., Gültekin A. H., Bürküt Y.
Progress in Mining and Oilfield Chemistry, vol.1, no.1, pp.249-258, 1999 (Peer-Reviewed Journal)

Books & Book Chapters

- I. **Jeolojik Ortamların İnsan sağlığı üzerindeki etkileri:**
Çelik Balcı N.
Elsevier, Ankara, 2011
- II. **Wall, J. D., Arkin, A. P., Balci, N. C., and Giles, B. J., (2007) Genetics and Genomics of Sulfate Respiration in Desulfovibrio. Microbial Sulfur Metabolism, Eds. Cornelius Friedrich and Christiane Dahl, pages: 1-11, chapter 1. 308. Springer Verlag.**
Çelik Balcı N.
Springer-Verlag , Berlin, 2007

Supported Projects

Çelik Balcı N., Tok E., Eriş K. K., KAİSER J., AKÇER ÖN S., Project Supported by Higher Education Institutions, Salda Gölü Güncel Çökel ve Stromatolit Oluşumlarının Jeokimyasal Mineralojik ve İzotopik Özelliklerinin Araştırılması, 2017 - 2019

Çelik Balcı N., Project Supported by Higher Education Institutions, Magnezyum karbonatlara öncü Ca fosfatca zengin nanopartiküller, 2016 - 2018

Çelik Balcı N., Project Supported by Higher Education Institutions, Acıgöl, Denizli Örneği Üzerinde Halofilik Mikroorganizmaların Karbonat Çökelimine Olan Etkilerinin Deneysel Olarak Araştırılması, 2016 - 2018

Çelik Balcı N., Project Supported by Higher Education Institutions, MICROBIAL OXIDATION OF METAL SULFUR MINERALS, 2015 - 2018

Çelik Balcı N., Project Supported by Higher Education Institutions, Bacterial Oxidation of Arsenopyrite, 2013 - 2018

Çelik Balcı N., Project Supported by Higher Education Institutions, Balıkesir-Balya Pb-Zn Maden Atıklarının Jeokimyasal Karakterizasyonu ve Çevresel Etkilerinin Araştırılması, 2013 - 2018

Çelik Balcı N., Project Supported by Higher Education Institutions, INFULUENCE OF SULFIDE MINERALOGY ON OXYGEN AND SULFUR ISOTOPE RATIOS OF SULFATE GENERATED VIA OXİIDATION, 2009 - 2018

Çelik Balcı N., Project Supported by Higher Education Institutions, Sülfid Mineralojosinin Sülfatın İzotop Değerlerine Olan Etkisi ve Asit Maden Sahalarının Oluşumu Açısından Değerlendirilmesi, 2007 - 2018

Çelik Balcı N., Project Supported by Higher Education Institutions, Kastamonu Küre Maden Atıklarının Çevre Jeokimyası Açısından İncelenmesi, 2013 - 2015

Çelik Balcı N., Project Supported by Higher Education Institutions, İTÜ Maslak Göletinin Mikrobiyolojik ve Biyokimyasal Özelliklerin Araştırılması, 2008 - 2009

Activities in Scientific Journals

Bulletin of Earth Sciences , Publication Committee Member, 2014 - Continues

Scientific Refereeing

Journal of Paleolimnology, SCI Journal, September 2018

Environmental Earth Sciences, SCI Journal, July 2018

Chemical Geology, SCI Journal, July 2018

Environmental Monitoring and Assessment, SCI Journal, May 2018

Arabian Journal of Geosciences, Journal Indexed in SSCI, February 2018

Carbonates and Evaporates, Journal Indexed in SSCI, January 2018

GSD, SCI Journal, January 2018

Carbonates and Evaporates, SCI Journal, January 2018

Carbonates and Evaporates, SCI Journal, July 2017

Sedimentology, SCI Journal, January 2017

Metrics

Publication: 92

Citation (WoS): 62

Citation (Scopus): 78

H-Index (WoS): 5

H-Index (Scopus): 5

Congress and Symposium Activities

7. Jeokimya Sempozyumu, Session Moderator, Antalya, Turkey, 2016

FEMS, Invited Speaker, Maastricht, Netherlands, 2015

6. Jeokimya Sempozyumu, Session Moderator, Mersin, Turkey, 2014

Non Academic Experience

University of California , Department of Earth Sciences, USA

Colorado School of Mines