

Assoc. Prof. NİHAT HAKAN AKYOL

Personal Information

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Education Information

Doctorate, Kocaeli Üniversitesi, Fen Bilimleri Enstitüsü, Jeoloji Mühendisliği (Dr), Turkey 2006 - 2012

Post Graduate, Kocaeli Üniversitesi, Fen Bilimleri Enstitüsü, Jeoloji Mühendisliği (YI), Turkey 2003 - 2006

Under Graduate, Kocaeli Üniversitesi, Mühendislik Fakültesi, Jeoloji Mühendisliği Bölümü, Turkey 1999 - 2003

Foreign Languages

English, C1 Advanced

Research Areas

Agricultural Sciences, Farming Economy, Environmental Technology, Environmental Impact Assessment, Environmental Risk Assessment, Contaminated Sites and Remediation, Water Pollution and Control, Soil and Groundwater Pollution and Control, Geological Engineering, Applied Geology, Environmental Geology and Geophysics, Hydrogeology and Hidrology

Academic Titles / Tasks

Associate Professor, Kocaeli Üniversitesi, Mühendislik Fakültesi, Jeoloji Mühendisliği Bölümü, 2017 - Continues

Assistant Professor, Kocaeli Üniversitesi, Mühendislik Fakültesi, Jeoloji Mühendisliği Bölümü, 2013 - 2017

Expert, University Of Arizona, Department Of Soil, Water And Environmental Science, Swes, 2010 - 2013

Research Assistant, Kocaeli Üniversitesi, Mühendislik Fakültesi, Jeoloji Mühendisliği Bölümü, 2003 - 2013

Academic and Administrative Experience

Deputy Head of Department, Kocaeli University, Mühendislik Fakültesi, Jeoloji Mühendisliği, 2020 - Continues

Rektörlük Akademik Teşvik Değerlendirme Komisyonu Üyesi, Kocaeli University, Mühendislik Fakültesi, Jeoloji Mühendisliği, 2017 - 2021

Fakülte Akademik Kurul Üyesi, Kocaeli University, Mühendislik Fakültesi, Jeoloji Mühendisliği, 2015 - 2017

Advising Theses

Gündüz Ö. C. , Akyol N. H. , AKYAZI-KUZULUK (SAKARYA) ÇEVRESİNDEKİ JEOTERMAL SİSTEMLERİN HİDROJEOLJİK VE HİDROJEOKİMYASAL İNCELENMESİ , Post Graduate, M.ALTINATA(Student), 2020

Akyol N. H. , Tce kaynak zonlarının yüzey aktif madde (SDS) ve kompleks şekerli (MCD) yerinde yıkama teknolojisi ile ıslahının incelenmesi, Post Graduate, S.TÜRKKAN(Student), 2018

Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- I. **Comparison of sorption and solute transport behaviour of several herbicides in an alkaline agricultural soil**
Akyol N. H. , Carroll K. C. , Çiftçi Çörtük E., Gündüz Ö. C. , Şahin N.
International Journal Of Environmental Analytical Chemistry, pp.1-20, 2021 (Journal Indexed in SCI Expanded)
- II. **Contamination by As, Hg, and Sb in a region with geogenic As anomaly and subsequent human health risk characterization**
Guney M., Karatas T., Ozkul C., AKYOL N. H. , Acar R. U.
ENVIRONMENTAL MONITORING AND ASSESSMENT, vol.192, no.1, 2020 (Journal Indexed in SCI)
- III. **Mobility of 2,4-Dichlorophenoxyacetic Acid, Glyphosate, and Metribuzine Herbicides in Terra Rossa-Amended Soil: Multiple Approaches with Experimental and Mathematical Modeling Studies**
GÜRSON A. P. , ÖZBAY İ., Ozhay B., Akyol G., AKYOL N. H.
WATER AIR AND SOIL POLLUTION, vol.230, no.9, 2019 (Journal Indexed in SCI)
- IV. **Experiments and sensitivity coefficients analysis for multiphase flow model calibration of enhanced DNAPL dissolution**
Karaoglu A. G. , Copty N. K. , AKYOL N. H. , Kilavuz S. A. , Babaei M.
JOURNAL OF CONTAMINANT HYDROLOGY, vol.225, 2019 (Journal Indexed in SCI)
- V. **Optimizing Process Parameters on the Remediation Efforts for the Mass Removal of DNAPL Entrapped in a Porous Media**
Mohammed M., ÖZBAY İ., Akyol G., AKYOL N. H. , ŞAHİN Y., ÖZBAY B., Turkkan S., Karatas T.
WATER AIR AND SOIL POLLUTION, vol.230, no.7, 2019 (Journal Indexed in SCI)
- VI. **A pore-scale investigation of heavy crude oil trapping and removal during surfactant-enhanced remediation**
Ghosh J., Tick G. R. , AKYOL N. H. , Zhang Y.
JOURNAL OF CONTAMINANT HYDROLOGY, vol.223, 2019 (Journal Indexed in SCI)
- VII. **Experimental comparison of agent-enhanced flushing for the recovery of crude oil from saturated porous media.**
Booth J., Tick G., Akyol N. H. , Greenberg R., Zhang Y.
Journal of contaminant hydrology, vol.226, pp.103504, 2019 (Journal Indexed in SCI)
- VIII. **Surfactant-Enhanced Permanganate Oxidation on Mass-Flux Reduction and Mass Removal (MFR-MR) Relationship for Pool-Dominated TCE Source Zones in Heterogeneous Porous Media**
AKYOL N. H.
WATER AIR AND SOIL POLLUTION, vol.229, no.8, 2018 (Journal Indexed in SCI)
- IX. **Effect of Cyclodextrin-Enhanced Dissolution on Mass Removal and Mass-Flux Reduction Relationships for Non-uniformly Organic Liquid Distribution in Heterogeneous Porous Media**
AKYOL N. H. , TURKKAN S.
WATER AIR AND SOIL POLLUTION, vol.229, no.2, 2018 (Journal Indexed in SCI)
- X. **Sorption and desorption behaviours of 2,4-D and glyphosate in calcareous soil from Antalya, Turkey**
ÖZBAY B., AKYOL N. H. , AKYOL G., ÖZBAY İ.
WATER AND ENVIRONMENT JOURNAL, vol.32, no.1, pp.141-148, 2018 (Journal Indexed in SCI)
- XI. **Effect of Organic Carbon Fraction on Long-term Atrazine Elution Tailing for Two Heterogeneous Porous Media: Experimental and Modeling Approach**
AKYOL N. H. , ÖZBAY İ., ÖZBAY B.
WATER AIR AND SOIL POLLUTION, vol.226, no.11, 2015 (Journal Indexed in SCI)
- XII. **Characterizing and modeling of extensive atrazine elution tailing for stable manure-amended agricultural soil**

- Akyol N. H.
CHEMOSPHERE, vol.119, pp.1027-1032, 2015 (Journal Indexed in SCI)
- XIII. **Transport and fate of ammonium and its impact on uranium and other trace elements at a former uranium mill tailing site**
Miao Z., Akyol H. N. , McMillan A. L. , Brusseau M. L.
APPLIED GEOCHEMISTRY, vol.38, pp.24-32, 2013 (Journal Indexed in SCI)
- XIV. **Impact of Enhanced-Flushing Reagents and Organic Liquid Distribution on Mass Removal and Mass Discharge Reduction**
AKYOL N. H. , Lee A. R. , Brusseau M. L.
WATER AIR AND SOIL POLLUTION, vol.224, no.10, 2013 (Journal Indexed in SCI)
- XV. **Oxidation of Nonaqueous Phase Trichloroethylene with Permanganate in Epikarst**
AKYOL N. H. , YOLCUBAL İ.
WATER AIR AND SOIL POLLUTION, vol.224, no.5, 2013 (Journal Indexed in SCI)
- XVI. **Biomonitoring of airborne metals using the Lichen Xanthoria parietina in Kocaeli Province, Turkey**
Demiray A. D. , YOLCUBAL İ., AKYOL N. H. , Cobanoglu G.
ECOLOGICAL INDICATORS, vol.18, pp.632-643, 2012 (Journal Indexed in SCI)
- XVII. **Ethanol Addition for Enhancing Denitrification at the Uranium Mill Tailing Site in Monument Valley, AZ**
Borden A. K. , Brusseau M. L. , Carroll K. C. , McMillan A., Akyol N. H. , Berkompas J., Miao Z., Jordan F., Tick G., Waugh W. J. , et al.
WATER AIR AND SOIL POLLUTION, vol.223, pp.755-763, 2012 (Journal Indexed in SCI)
- XVIII. **Sorption and transport of trichloroethylene in caliche soil**
AKYOL N. H. , YOLCUBAL İ., Yuksel D. I.
CHEMOSPHERE, vol.82, no.6, pp.809-816, 2011 (Journal Indexed in SCI)
- XIX. **Adsorption and transport of arsenate in carbonate-rich soils: Coupled effects of nonlinear and rate-limited sorption**
YOLCUBAL İ., AKYOL N. H.
CHEMOSPHERE, vol.73, no.8, pp.1300-1307, 2008 (Journal Indexed in SCI)
- XX. **Retention and transport of hexavalent chromium in calcareous karst soils**
Yolcubal İ., Akyol N. H.
TURKISH JOURNAL OF EARTH SCIENCES, vol.16, pp.363-379, 2007 (Journal Indexed in SCI)

Articles Published in Other Journals

- I. **TCE KAYNAK ZONLARIN YERİNDE KİMYASAL YIKAMA İLE ISLAHI: TWEEN 80 VE SDS İLE YIKAMA PERFORMANSI**
ASLAN KILAVUZ S., AKYOL N. H.
Dokuz Eylül Fen ve Mühendislik Dergisi, vol.20, 2018 (Other Refereed National Journals)
- II. **TCE Kaynak Zonların Yerinde Kimyasal Yıkama ile Islahı: Tween 80 ve SDS ile Yıkama Performansı**
ASLAN KILAVUZ S., AKYOL N. H.
Dokuz Eylül Üniversitesi-Mühendislik Fakültesi Fen ve Mühendislik Dergisi, vol.20, no.58, pp.197-208, 2018 (Other Refereed National Journals)
- III. **Cyclodextrin-enhanced in situ flushing of TCE source zones resided in heterogeneous porous media**
AKYOL N. H. , TURKKAN S.
International Journal of Advances in Science Engineering and Technology, vol.5, pp.22-25, 2017 (Refereed Journals of Other Institutions)
- IV. **Sorption Desorption Behavior of Atrazine for Calcareous Soil from Antalya Turkey**
AKYOL N. H. , ÖZBAY İ., AKYOL G., ÖZBAY B.
Transactions on Environment and Development, 2016 (Refereed Journals of Other Institutions)
- V. **In-situ chemical oxidation of residual TCE by permanganate in epikarst**

AKYOL N. H. , YOLCUBAL İ.

World Academy of Science, Engineering and Technology, vol.57, pp.353-355, 2009 (Refereed Journals of Other Institutions)

Refereed Congress / Symposium Publications in Proceedings

- I. **Pore-scale Investigation of Heavy Crude Oil Trapping and Removal During Surfactant-Enhanced Remediation**
TICK G., GHOSH J., AKYOL N. H. , ZHANG Y.
AGU FALL MEETING, 9 - 13 December 2019
- II. **Comparison of Agent-Enhanced Flushing for the Recovery of Crude Oil from Saturated Porous Media via Pore-Scale and Interfacial Experiments**
Rebecca G., Booth J., Tick G., AKYOL N. H. , zhang y.
AGU FALL MEETING, 9 - 13 December 2019
- III. **Comparison of different reagents for the enhanced DNAPL remediation in heterogeneous porous media**
demiray z., AKYOL N. H. , copty n.
EGU 2019, 7 - 12 April 2019
- IV. **Mobility of atrazine in stable manure-amended agricultural soil**
AKYOL N. H.
International Conference on Pollution Control Sustainable Environment, International Conference on Pollution Control Sustainable Environment, 26 July - 28 June 2018
- V. **Surfactant-Enhanced Potassium Permanganate Oxidation for TCE Source Zones in Heterogeneous Porous Media**
AKYOL N. H.
INTERNATIONAL CONFERENCE ON AGRICULTURAL, CHEMICAL, BIOLOGICAL AND ENVIRONMENTAL SCIENCES (ACBES-18), 20 - 21 June 2018
- VI. **THE PRELIMINARY ASSESSMENT OF HEAVY METAL CONCENTRATIONS IN SOILS AROUND YAGCIK VILLAGE AND EMET TOWN CENTER (KUTAHYA, TURKEY)**
ÖZKUL C., ÖNGEN A. S. , ACAR R. U. , AKYOL N. H. , GÜNEY M., KARATAŞ T.
4TH INTERNATIONAL CONFERENCE ON ENGINEERING AND NATURAL SCIENCE, Kiev, Ukraine, 2 - 06 May 2018
- VII. **Mobility Of Atrazine In Agricultural Soil From Sakarya, Turkey**
İŞGÖREN M., ASLAN KILAVUZ S., AKYOL N. H.
3. International Conference On Civil And Environmental Engineering, 24 - 27 April 2018
- VIII. **TCE Kaynak zonlarının Tween 80, SDS ve Saf su ile yerinde ıslahı**
TURKKAN S., AKYOL N. H.
INES 2017, 18 - 21 October 2017
- IX. **IN-SITU REMEDIATION OF TRICHLOROETHYLENE SOURCE ZONES BY SODIUM DODEXYL SULFATE FLUSHING**
TURKKAN S., AKYOL N. H.
40. JEOLJİ KURULTAYI ÇUKUROVA ÜNİVERSİTESİ, 3 - 06 May 2017
- X. **Sorption behavior of 2,4-D in a natural soil from Antalya, Turkey**
AKYOL N. H. , ÖZBAY B., ÖZBAY İ., AKYOL G.
ICENS, 3 - 07 May 2017
- XI. **Effect of Enhanced-Solubilization Agents on Mass Removal and Mass Discharge Reduction for TCE Source Zones in Heterogeneous Porous Media**
AKYOL N. H. , TURKKAN S., ASLAN KILAVUZ S., ÖZBAY İ., ÖZBAY B.
ICENS, 3 - 07 May 2017
- XII. **Sorption behavior of 2,4-D in a natural soil from Antalya, Turkey**
AKYOL N. H. , ÖZBAY B., ÖZBAY İ., AKYOL G.

ICENS-2017, Budapest, Hungary, 3 - 07 May 2017

XIII. Effect of Enhanced-Solubilization Agents on Mass Removal and Mass Discharge Reduction in Heterogeneous Porous Media

AKYOL N. H. , türkkan s., ASLAN KILAVUZ S., ÖZBAY İ., ÖZBAY B.

ICENS-2017, Budapest, Hungary, 3 - 07 May 2017

XIV. Arsenic Contamination in Soil in Emet-Kutahya Basin (Turkey) and Risk Characterization for Human Exposure.

KARATAŞ T., GÜNEY M., ÖZKUL C., AKYOL N. H. , ACAR R. U.

3RD INTERNATIONAL CONFERENCE ON ENGINEERING AND NATURAL SCIENCES (ICENS), 3 - 07 May 2017, pp.73

XV. İĞDEKÖY VE KIRGIL (EMET-KÜTAHYA) KÖYLERİ TOPRAKLARINDAKİ AĞIR METAL KONSANTRASYONLARININ BELİRLENMESİ İÇİN ÖN DEĞERLENDİRME ÇALIŞMASI

ÖZKUL C., ACAR R. U. , AKYOL N. H. , GÜNEY M., KARATAŞ T.

Çukurova Üniversitesi Jeoloji Mühendisliği Bölümü 40. Yıl Jeoloji Sempozyumu, Adana, Turkey, 3 - 06 May 2017, pp.127

XVI. In Situ Remediation of Chlorinated Solvents in Heterogeneous Porous Media by Cyclodextrine

TURKKAN S., AKYOL N. H. , KARATAŞ T., ÖZBAY İ., ÖZBAY B.

ICENS , Sarajevo, Bosnia And Herzegovina, 23 - 28 May 2016

XVII. TCE Kaynak Zonların Yerinde Kimyasal Yıkama ile İslahı Tween 80 SDS ve Etil Alkol ile Yıkama Performansı

AKYOL N. H. , ASLAN KILAVUZ S.

7. uluslararası katılımlı jeokimya sempozyumu, Turkey, 16 - 18 May 2016

XVIII. Distribution and Recovery of Crude Oil in Various Types of Porous Media and Heterogeneity Configurations

geoffrey r t, ghosh j., greenberg r., AKYOL N. H.

AGU Fall Meeting San Francisco, CA, USA, San-Francisco, Costa Rica, 14 - 18 December 2015

XIX. Non ideal transport of atrazine in two natural porous media

AKYOL N. H. , ÖZBAY İ., ÖZBAY B., AKYOL G.

Fifth International Conference on Environmental Management, Engineering, Planning and Economics (CEMEPE 2015) and SECOTOX Conference, Greece, 14 - 18 June 2015

XX. In situ chemical oxidation of residual TCE in epikarst

AKYOL N. H. , YOLCUBAL İ.

World Academy of Science, Engineering and Technology, Amsterdam, Netherlands, 9 - 11 September 2009, vol.57, pp.353-355

Supported Projects

AKYOL N. H. , TİCK G., COPTY N., Project Supported by Higher Education Institutions, Yüzey Aktif Madde İle Ham Petrol Geri Kazanım Potansiyelinin Değerlendirilmesi, 2021 - Continues

ŞAHİN Y., AKYOL N. H. , KASAP S. S. , Project Supported by Higher Education Institutions, Taguchi ve YSA Deney Tasarımları ile Tetrakloroetilen Kaynak Zonların Kompleks Şeker ile İslah Optimizasyonunun Belirlenmesi, 2021 - Continues

AKYOL N. H. , AYVA A., Project Supported by Higher Education Institutions, Gölcük Ovası tarım topraklarında atrazin ve metribüzün herbisitlerinin taşınım ve tutunum davranışlarının incelenmesi, 2020 - Continues

PEKŞEN E., KAPLANVURAL İ., AKYOL N. H. , Project Supported by Higher Education Institutions, AKİFER KİRLİLİĞİNİN VE TEMİZLENME SÜRECİNİN JEOFİZİK VE JEOKİMYASAL YÖNTEMLERLE İZLENMESİ, 2019 - Continues

AKYOL N. H. , Project Supported by Higher Education Institutions, HETEROJEN JELOJİK SİSTEMLERDE DEPOLANAN DNAPL KARIŞIMLARININ KOMPLEKS ŞEKER (MCD) İLE İSLAH PERFORMANSININ İNCELENMESİ, 2018 - Continues

AKYOL N. H. , TUBITAK Project, Akifer sistemlerinde depolanan DNAPL karışımlarının deneysel ve modelleme çalışmaları ile ıslahının incelenmesi: Yerinde kimyasal ve oksidasyon teknolojilerinin performansı, 2017 - Continues

ŞENOL L., AKYOL N. H. , Project Supported by Higher Education Institutions, Taguchi deneysel tasarım yöntemi

kullanarak kirlenmiş toprak ıslahı optimizasyonu, 2020 - 2021

Gündüz Ö. C. , Akyol N. H. , Project Supported by Higher Education Institutions, Kocaeli Bölgesi Tarım Topraklarında Pestisitlerin Mobilitesinin İncelenmesi, 2018 - 2020

AKYOL N. H. , Project Supported by Higher Education Institutions, TETRAKLOROETİLEN (PCE) İLE KİRLENMİŞ GÖZENEKLİ ORTAMLARIN KOMPLEKS ŞEKER (HPCD) İLE ISLAH PERFORMANSININ İNCELENMESİ, 2018 - 2019

AKYOL N. H. , Project Supported by Higher Education Institutions, MUĞLA BÖLGESİ TARIM TOPRAĞINDA ATRAZİN HERBİSİTİNİN TUTUNUMU VE TAŞINIMININ İNCELENMESİ, 2017 - 2018

AKYOL N. H. , Project Supported by Higher Education Institutions, HAM PETROL İLE KİRLENMİŞ GÖZENEKLİ ORTAMLARIN YÜZEY AKTİF MADDE İLE ISLAHI, 2016 - 2018

AKYOL N. H. , TUBITAK Project, TCE Kaynak Zonlarının Yüzey Aktif Maddeli Potasyum Permanganat İle Oksidasyonu Teknolojinin Kütle Giderimi Kütle Akış Azalımı İlişkisine Olan Etkisi, 2015 - 2018

AKYOL N. H. , Project Supported by Higher Education Institutions, KORLU SOLVENTLERİN KİMYASAL YIKAMA İLE ISLAH PERFORMANSININ DEĞERLENDİRİLMESİ, 2016 - 2017

AKYOL N. H. , Project Supported by Higher Education Institutions, Heterojen gözenekli ortamlarda depolanan klorlu solventlerin kompleks şeker (MCD) ile ıslahı, 2015 - 2016

AKYOL N. H. , Project Supported by Higher Education Institutions, YÜZEY AKTİF MADDELİ KİMYASAL YIKAMA (TWEEN 80) TEKNOLOJİSİNİN KÜTLE GİDERİMİ/KÜTLE AKIŞ AZALIMI İLİŞKİSİNE OLAN ETKİSİ, 2015 - 2016

AKYOL N. H. , Project Supported by Higher Education Institutions, AKİFER TABANINDA DEPOLANAN DNAPL TÜRÜ BİLEŞİKLERİN YÜZEY AKTİF MADDE İLE YERİNDE ISLAHI: SDS ve TWEEN 80'İN PERFORMANSI, 2014 - 2016

AKYOL N. H. , Project Supported by Higher Education Institutions, Farklı tarım topraklarında herbisit taşınım ve tutunumunun deneysel ve modelsel yaklaşım ile incelenmesi, 2014 - 2016

AKYOL N. H. , Project Supported by Higher Education Institutions, KLORLU SOLVENTLERİN HETEROJEN JEOLAJİK SİSTEMLERDE YÜZEY AKTİF MADDE İLE ISLAH PERFORMANSININ DEĞERLENDİRİLMESİ, 2014 - 2015

Non Academic Experience

Other, The University of Alabama