

## Prof. AHMET NEDİM AY

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### International Researcher IDs

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### Education Information

Doctorate, Hacettepe University, Fen Bilimleri Enstitüsü, Kimya, Turkey 2000 - Continues

Postgraduate, Hacettepe University, Fen Bilimleri Enstitüsü, Kimya, Turkey 1997 - Continues

Undergraduate, Hacettepe University, Fen Fakültesi, Kimya, Turkey 1991 - Continues

### Foreign Languages

English, C1 Advanced

### Research Areas

Boron Chemistry, Chemistry, Inorganic Chemistry, Bioinorganic Chemistry, Natural Sciences

### Academic Titles / Tasks

Associate Professor, Hacettepe University, Fen Fakültesi, Kimya Bölümü, 2012 - Continues

Expert, Hacettepe University, Fen Fakültesi, Kimya Bölümü, 2007 - 2012

### Academic and Administrative Experience

Hacettepe Üniversitesi, Fen Fakültesi, Kimya Bölümü, 2014 - Continues

### Advising Theses

AY A. N., KARAN B., BNCT uygulamaları için karboran türevleri taşıyan magnezyum ferrit tabakalı çift hidroksit nano-kompozitlerinin hazırlanması ve karakterizasyonu, Postgraduate, H.AKAR(Student), 2016

AY A. N., Manyetik polioksometalat-tabakalı çift hidroksit nano-kompozitinin hazırlanması ve katalitik aktivitesinin incelenmesi, Postgraduate, S.GÖKÇE(Student), 2015

KARAN B., AY A. N., Bir zeolit-tabakalı çift hidroksit kompozitinin hazırlanması ve sulu amonyum pentaborat

çözümlerinden anyon ve katyonların adsorpsiyonunda kullanılması, Postgraduate, D.KONUĞ(Student), 2013  
AY A. N., KARAN B., Demir oksit nanoparçacıkları üzerine desteklenmiş tabakalı çift hidroksitlere anti-kanser ilaç tutuklanması ve tanecik şekline bağlı salınım davranışları, Postgraduate, G.TUNCELLİ(Student), 2012

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

- I. **Layered double hydroxide–borate composites supported on magnetic nanoparticles: preparation, characterization and molecular dynamics simulations**  
AY A. N., Zumreoglu-Karan B., Kalinichev A. G., Rives V., Trujillano R., TEMEL A.  
Journal of Porous Materials, vol.27, no.3, pp.735-743, 2020 (SCI-Expanded)
- II. **Carborane-layered double hydroxide nanohybrids for potential targeted- and magnetically targeted- BNCT applications**  
AY A. N., Akar H., Zaulet A., Vinas C., Teixidor F., Zumreoglu-Karan B.  
DALTON TRANSACTIONS, vol.46, no.10, 2017 (SCI-Expanded)
- III. **5-Fluorouracil intercalated iron oxide@layered double hydroxide core-shell nano-composites with isotropic and anisotropic architectures for shape-selective drug delivery applications**  
Tuncelli G., AY A. N., Zumreoglu-Karan B.  
MATERIALS SCIENCE & ENGINEERING C-MATERIALS FOR BIOLOGICAL APPLICATIONS, vol.55, pp.562-568, 2015 (SCI-Expanded)
- IV. **Boron isotopic fractionation in aqueous boric acid solutions over synthetic minerals: Effect of layer and surface charge on fractionation factor**  
ELMACI G., ICTEN O., AY A. N., Zumreoglu-Karan B.  
APPLIED CLAY SCIENCE, vol.107, pp.117-121, 2015 (SCI-Expanded)
- V. **Magnetically-recoverable Pd-immobilized layered double hydroxide-iron oxide nanocomposite catalyst for carbon-carbon cross-coupling reactions**  
AY A. N., Abramova N. V., Konuk D., Lependina O. L., Sokolov V. I., Zuemreoglu-Karan B.  
INORGANIC CHEMISTRY COMMUNICATIONS, vol.27, pp.64-68, 2013 (SCI-Expanded)
- VI. **A mononuclear, mixed (salicylato) (nicotinamide) complex of Zn(II) with penta- and hexa-coordination sites: a novel framework structure**  
KÖSE D. A., AY A. N., Sahin O., BÜYÜKGÜNGÖR O.  
JOURNAL OF THE IRANIAN CHEMICAL SOCIETY, vol.9, no.4, pp.591-597, 2012 (SCI-Expanded)
- VII. **Layered double hydroxides - multifunctional nanomaterials**  
Zumreoglu-Karan B., AY A. N.  
CHEMICAL PAPERS, vol.66, no.1, pp.1-10, 2012 (SCI-Expanded)
- VIII. **Magnetic nanocomposites with drug-intercalated layered double hydroxide shell supported on commercial magnetite and laboratory-made magnesium ferrite core materials**  
AY A. N., Konuk D., Zumreoglu-Karan B.  
MATERIALS SCIENCE & ENGINEERING C-MATERIALS FOR BIOLOGICAL APPLICATIONS, vol.31, no.5, pp.851-857, 2011 (SCI-Expanded)
- IX. **Importance of the interlayer orientation in borate-intercalating layered double hydroxides**  
AY A. N.  
JOURNAL OF THERMAL ANALYSIS AND CALORIMETRY, vol.103, no.3, pp.897-902, 2011 (SCI-Expanded)
- X. **Layered double hydroxides with interlayer borate anions: A critical evaluation of synthesis methodology and pH-independent orientations in nano-galleries**  
AY A. N., Zumreoglu-Karan B., TEMEL A., Mafra L.  
APPLIED CLAY SCIENCE, vol.51, no.3, pp.308-316, 2011 (SCI-Expanded)
- XI. **Prolate spheroidal hematite particles equatorially belt with drug-carrying layered double hydroxide disks: Ring Nebula-like nanocomposites**  
AY A. N., Konuk D., Zumreoglu-Karan B.  
NANOSCALE RESEARCH LETTERS, vol.6, 2011 (SCI-Expanded)

- XII. **Tetraaquabis(oxalato-kappa O)cobalt(II) dihydrate**  
AY A. N., Kose D. A., Tercan B., Yuksel F., HÖKELEK T.  
ACTA CRYSTALLOGRAPHICA SECTION E-STRUCTURE REPORTS ONLINE, vol.66, 2010 (SCI-Expanded)
- XIII. **Bioinorganic Magnetic Core-Shell Nanocomposites Carrying Antiarthritic Agents: Intercalation of Ibuprofen and Glucuronic Acid into Mg-Al-Layered Double Hydroxides Supported on Magnesium Ferrite**  
AY A. N., Zumreoglu-Karan B., TEMEL A., RİVES V.  
INORGANIC CHEMISTRY, vol.48, no.18, pp.8871-8877, 2009 (SCI-Expanded)
- XIV. **Boron removal by hydrotalcite-like, carbonate-free Mg-Al-NO<sub>7</sub>-LDH and a rationale on the mechanism**  
AY A. N., Zuemreoglu-Karan B., TEMEL A.  
MICROPOROUS AND MESOPOROUS MATERIALS, vol.98, pp.1-5, 2007 (SCI-Expanded)
- XV. **Structural and magnetic studies on mono- and polynuclear chromium ascorbate complexes**  
Zumreoglu-Karan B., Ay A. N., Unaleroglu C., Firat T., Ristau T., Jabs W.  
TRANSITION METAL CHEMISTRY, vol.30, no.4, pp.451-459, 2005 (SCI-Expanded)
- XVI. **Effects of neutral, cationic, and anionic chromium ascorbate complexes on isolated human mitochondrial and genomic DNA**  
Ay A. N., Zumreoglu-Karan B., Oner R., Unaleroglu C., Oner C.  
JOURNAL OF BIOCHEMISTRY AND MOLECULAR BIOLOGY, vol.36, no.4, pp.403-408, 2003 (SCI-Expanded)
- XVII. **Monodentate chromium(III) ascorbate complexes prepared via chromate reduction in THF**  
Zumreoglu-Karan B., Ay A. N., Unaleroglu C.  
SYNTHESIS AND REACTIVITY IN INORGANIC AND METAL-ORGANIC CHEMISTRY, vol.32, no.6, pp.1071-1084, 2002 (SCI-Expanded)
- XVIII. **Ascorbic acid as a potential masking agent in the tanning process. Olated chromium complexes involving ligating ascorbate and bridging sulfate groups**  
Zumreoglu-Karan B., Unaleroglu C., Ay A. N.  
TRANSITION METAL CHEMISTRY, vol.27, no.4, pp.437-441, 2002 (SCI-Expanded)

## Supported Projects

AY A. N., Project Supported by Higher Education Institutions, H.Ü. Fen Fakültesi Kimya Bölümü İnorganik Kimya Araştırma Laboratuvarında kullanılan PARR 5500 Yüksek Basınç Reaktörünün yırtılan "Rapture Disk"inin acil ihtiyaç olarak temini, 2016 - 2016

AY A. N., Project Supported by Higher Education Institutions, BNCT UYGULAMALARI İÇİN KARBORAN TÜREVLERİ TAŞIYAN DEMİR OKSİT-TABAKALI ÇİFT HİDROKSİT NANO-KOMPOZİTLERİNİN HAZIRLANMASI VE KARAKTERİZASYONU, 2014 - 2016

## Metrics

Publication: 18

Citation (WoS): 475

Citation (Scopus): 505

H-Index (WoS): 10

H-Index (Scopus): 10