İSTANBUL AYDIN ÜNİVERSİTESİ
ECZACILIK FAKÜLTESİ

E-BÜLTEN

1 KASIM- 30 KASIM 2024

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YAYIN KURULU

BÖLÜMLER VE ANABİLİM DALLARI

Eczacılık Teknolojisi Bölümü

- Farmasötik Teknoloji Anabilim Dalı

Eczacılık Meslek Bilimleri Bölümü

- Farmakoloji Anabilim Dalı
- Farmasötik Kimya Anabilim Dalı
- Farmakognozi Anabilim Dalı
- Farmasötik Toksikoloji Anabilim Dalı

Temel Eczacılık Bilimleri Bölümü

- Analitik Kimya Anabilim Dalı
- Biyokimya Anabilim Dalı
- Farmasötik Mikrobiyoloji Anabilim Dalı

Dekanımız Prof. Dr. A. Nurten Özdemir'in Dekanlar Konseyi Toplantısına Katılımı

Dekanımız Prof. Dr. A. Nurten Özdemir 11 Kasım 2024 Pazartesi günü Ankara'da düzenlenen Mesleki Yeterlilik Kurumu, Eczacılık Fakültesi Dekanlar Konseyi ve ECZAKDER'in katılımı ile Eczacılık Eğitiminin ele alındığı toplantıya katıldı.

TURKCHEM EURASIA 2024 Ziyareti Gerçekleştirildi

Fakültemiz öğretim üyelerinden Dr. Öğr. Üyesi Cem Erkmen ve Arş. Gör. Dr. Zeynep Türk 27.11.2024-29.11.2024 tarihleri arasında İstanbul Fuar Merkezi'nde gerçekleşen TURKCHEM EURASIA 2024'e projelerle ve malzemelerle ilgili fikir alışverişlerinde bulunmak üzere ziyarette bulunmuşlardır. Yıllardır "Kimya ile İlgili Her Şey" sloganıyla yerli ve yabancı sektör profesyonellerinin buluşma noktası olan TURKCHEM FUARI'nda sektöre dair son gelişmelerle ilgili bilgiler alınmış ve stantlar ziyaret edilerek sektör ile üniversite iş birlikleri adına ilgili yetkililerle görüşmeler yapılmıştır.

ECZAKDER Eczacılık Fakültesi Ara Değerlendirmesi

Dekan Yardımcımız ve Farmasötik Kimya Anabilim Dalı Öğretim Üyemiz Doç. Dr. Sevgi Karakuş, ECZAKDER tarafından Adize üyesi olarak 24-26 Kasım 2024 tarihleri arasında Erciyes Üniversitesi'nde gerçekleşen Eczacılık Fakültesi Ara Değerlendirmesi'ne katılmıştır.

50. Ulusal Hematoloji Kongresi'ne katılmı

Biyokimya Anabilim Dalı Öğretim Üyesi Prof. Dr. Fikriye Uras, 30 Ekim-2 Kasım tarihlerinde Antalya'da gerçekleşen 50. Ulusal Hematoloji Kongresi'ne katılmıştır.

Analitik Kimya Anabilim Dalı Öğretim Üyemiz Prof. Dr. Abdulhadi Baykal'ın Q1 indeksli Inorganic Chemistry dergisinde ***Fabrication of Nd−Ho Cosubstituted Co0.5Ni0.5Fe2O4 Nanospinel Ferrites and Exploration of Their Microstructure, Magnetic, and Electromagnetic Characteristics*** çalışması yayınlanmıştır.

Inorganic Chemistry › Vol 63/Issue 43 › Article

ARTICLE | October 18, 2024

Fabrication of Nd−Ho Cosubstituted $Co_{0.5}Ni_{0.5}Fe_2O_4$ Nanospinel Ferrites and Exploration of Their Microstructure, Magnetic, and Electromagnetic Characteristics

Yassine Slimani, Munirah Abdullah Almessiere*, Abdulhadi Baykal, Ayse Demir Korkmaz, Hakan Gungunes, Sagar E. Shirsath, Denis S. Klygach, Tatiana I. Zubar, Alex V. Trukhanov, and Latifah I. Al-Jumaiah

Analitik Kimya Anabilim Dalı Öğretim Üyemiz Prof. Dr. Abdulhadi Baykal'ın Q2 indeksli Applied Physics A dergisinde ***Impact of palladium ions doping on structural, magnetic, and electromagnetic properties and hyperfine interactions of Co-Ni nanospinel ferrites*** isimli çalışması yayınlanmıştır.

Impact of palladium ions doping on structural, magnetic, and electromagnetic properties and hyperfine interactions of Co-Ni nanospinel ferrites

M. A. Almessiere[1,2] · A. Baykal[3,4] · Y. Slimani[1] · H. Güngüneş[5] · A. Demir Korkmaz[6] · D. S. Klygach[7] · S. V. Trukhanov[8,9] · T. I. Zubar[9] · A. V. Trukhanov[7,10]

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Abstract

Pd^{2+} ions substituted Co-Ni spinel ferrites nanoparticles ($Co_{0.5}Ni_{0.5}Pd_xFe_{2-x}O_4$ (Pd→$CoNiFe_2O_4$) NSFs) have been synthesized via a hydrothermal route assisted with polyethylene glycol (PEG). XRD, SEM, TEM, HR-TEM, VSM, and Mossbauer spectroscopy were used to provide a thorough analysis of the phase and structure, magnetic characteristics, and hyperfine interactions. Magnetic features of prepared NPs showed ferrimagnetic behavior. In comparison to non-doped NPs, the incorporation of a small amount of Pd ions within $Co_{0.5}Ni_{0.5}Fe_2O_4$ provoked initially a slight rise in magnetization and coercivity magnitudes. Furthermore, as the Pd^{2+} ions content continued to increase, magnetization and coercivity exhibited a diminishing trend. These observations are explained by changes in size and morphology, variations in the strength of superexchange interactions, and cation redistribution. Mössbauer spectra for all samples exhibited four distinct magnetic sextets. The doped ions were substituted with Fe^{3+} ions at B site. The cation distribution was ascertained through the utilization of Mossbauer spectroscopy. An investigation of electromagnetic (EM) properties was conducted within 2–18 GHz. EM characteristics of the samples can be explained by the main contribution in EM absorption from the electric energy losses.

Keywords Spinel ferrites · Pd-substitution · Magnetic properties · Magnetic structure · Hyperfine interactions · Electromagnetic properties

Analitik Kimya Anabilim Dalı Öğretim Üyemiz Prof. Dr. Abdulhadi Baykal'ın Q2 indeksli Applied Physics A dergisinde ***Gas-liquid diffusion synthesis of Fe3+ doped Ni-Co nanospinel oxides: An investigation on structural-magnetic traits and mossbauer analysis*** ,isimli çalışması yayınlanmıştır.

Gas liquid diffusion synthesis of Fe^{3+} doped Ni-Co nanospinel oxides: An investigation on structural-magnetic traits and mossbauer analysis

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Abstract

Herein for synthesis of Fe-doped $NiCo_2O_4$ nanospinel oxides ($(NiFe_xCo_{2-x}O_4$ ($x \leq 0.10$), Fe→NiCo NSOs)) under ambient condition, method of a facile gas liquid diffusion was employed. Mossbauer spectroscopy, SEM together with EDX, XRD, TEM and VSM techniques have been used to determine the hyperfine interactions, morphology, structure, composition and magnetic characteristics of the products respectively. XRD and EDX analyses approved the absence of any secondary phase. Their crystallite is within 11–19 nm range. The products' flower like morphology was proved by SEM analysis. Magnetic features of Fe→NiCo ($x \leq 0.10$) NSOs are elucidated by the examination of magnetization vs. field curves conducted at both low (10 K) and high (300 K, RT) temperatures. This analysis reveals that these nanostructures manifest paramagnetic performance at RT and transition to a ferromagnetic essence at 10 K. Magnetization shows fluctuations with growing doping content. The obtained SQR (squareness ratio) values tend toward vanishing at RT and approach zero at 10 K, indicating that even at lower temperatures, Fe→NiCo ($x \leq 0.10$) NSOs do not exhibit complete alignment like single domain ferromagnets. These findings emphasize the feasibility of tailoring the specific magnetic properties of Co-Ni NSOs through the precise modulation of Fe concentration. The Mössbauer spectra composed of two doublets.

Keywords Co-Ni spinel oxide · Magnetic properties · SQR values · Hyperfine interactions

Farmakoloji Anabilim Dalı Öğretim Üyemiz Prof. Dr. Yusuf Öztürk'ün Q3 indeksli Neuroscience Letters dergisinde ***Optimized primary dorsal root ganglion cell culture protocol for reliable K+ current patch-clamp recordings.,*** isimli çalışması yayınlanmıştır.

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Neuroscience Letters

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Optimized primary dorsal root ganglion cell culture protocol for reliable K^+ current patch-clamp recordings

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Dorsal root ganglion
Primary cell culture
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ABSTRACT

DRG primary neuron cultures, derived from rodents, closely mimic properties of sensory neurons *in vivo* and are highly useful for studying pain and neurological disorders. These cultures are pivotal in patch-clamp electrophysiology for sensory neuron properties analysis. A detailed, replicable protocol in scientific research ensures experiment accuracy and reproducibility. This paper provides comprehensive details for replicating the protocol and achieving consistent results in primary DRG cell culture as used for patch-clamp recordings. We outlined a comprehensive protocol for establishing primary DRG cell culture, optimized for improved gigaseal formation in whole-cell patch-clamp recordings. Additionally, we conducted a simulation study focused on recording macroscopic K^+ channels. The findings established an optimized novel protocol that works reliably for whole-cell patch-clamp recordings and data analysis using primary DRG cells prepared as described in this publication. The details for the protocol in the literature are dispersed across various publications, making it challenging to find a comprehensive summary in one source. This study confirms, for the first time, the efficacy of using fewer protocol steps, which reduces stress and variability in obtaining suitable cells for patch-clamp recordings compared to existing methods in the literature. Given the challenges posed by the dissociation process of primary DRG cells and the importance of comprehensive method documentation in the literature, the protocol presented provides improved and consistent applications of primary DRG cell culture in patch-clamp recordings.

Dekan Yardımcımız ve Farmasötik Kimya Anabilim Dalı Öğretim Üyemiz Doç. Dr. Sevgi Karakuş'un Q2 indeksli Journal of Biochemical and Molecular Toxicology dergisinde ***Synthesis, Biological Evaluation and in Silico Studies of Novel Urea/Thiourea Derivatives of Lenalidomide*** isimli çalışması yayınlanmıştır.

Synthesis, Biological Evaluation and in Silico Studies of Novel Urea/Thiourea Derivatives of Lenalidomide

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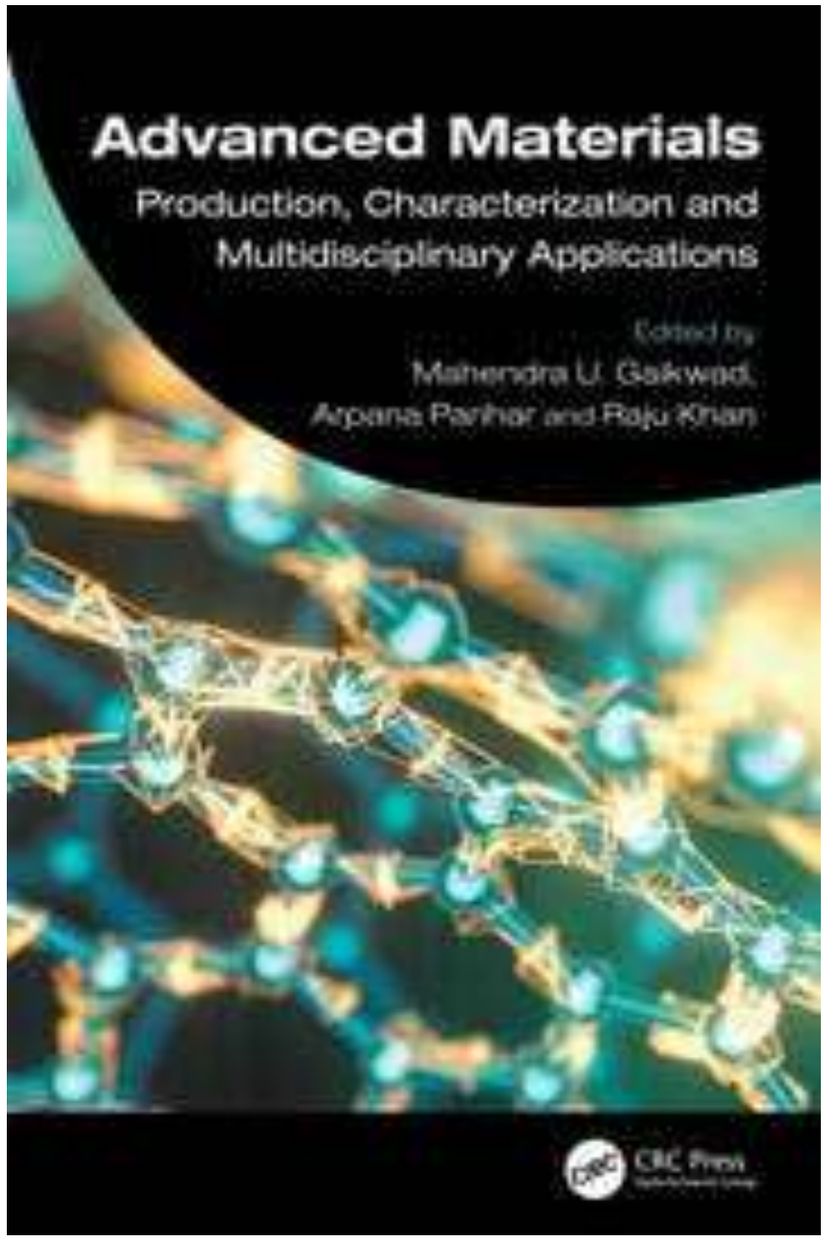
Keywords: Caki | HDAC | Lenalidomide | thiourea | urea

ABSTRACT

Designing new compounds from existing chemotherapeutic drugs to enhance inhibitory effects on tumor cells while overcoming multidrug resistance is one of the important strategies for new drug discovery in medicinal chemistry. A new series of urea and thiourea derivatives based on Lenalidomide as potential anticancer agents have been designed and synthesized. *In vitro* anticancer activity assay against Caki cancer cells and HUVEC endothelial cells revealed that 1-(4-methylphenyl)-3-[2-(2,6-dioxopiperidin-3-yl)-1-oxoisoindolin-4-yl]urea (**11**) exhibited the highest anticancer activity and selectivity in the series with IC_{50} values of 9.88 and 179.03 μM, respectively. Among the compounds, **11** showed significant HDAC1 inhibiton of 68.02 ± 2.44% at 10 μM concentration. TGF-β, Bax, Bcl-2 protein levels and scratch assay were analyzed in Caki cells. As a result, compound **11** induced apoptosis in Caki cells. In this study, it has been demonstrated that compound **11** can be a lead compound for further detailed investigation in renal cancer treatment. Through molecular docking studies, it was determined that the most active compound, **11**, forms stable interactions with key residues in the enzyme's active site, particularly engaging in hydrogen bonds with GLY149 and coordinating with the zinc ion in the HDAC1 active site. These interactions are crucial for the observed inhibitory activity. Molecular dynamics simulation revealed the binding event of the most active compound with class I histone deacetylase and the stability of the complex in a biological environment.

Analitik Kimya Anabilim Dalı Öğretim Üyemiz Dr. Öğr. Üyesi Cem Erkmen'in In: Advanced Materials: Production, Characterization and Multidisciplinary Applications (1st ed.) isimli uluslararası kitapta '***Chapter 9: Advanced 2D Material Based Miniaturized Devices for Biomedical Applications***' *isimli kitap bölümü yayınlanmıştır.*



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