RUSSIAN JOURNAL OF PHYSICAL CHEMISTRY A

Focus on Chemistry

Pleiades
Publishing Group
Over 50
years
In the service of science and education

Editor-in-Chief Aslan Yu. Tsivadze

> https://pleiades.online https://link.springer.com



Distributed by **SPRINGER NATURE**

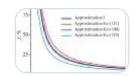


A CONTRACTOR OF STREET

IX All-Russian Scientific Conference with International Participation "Current Problems of Theory and Practice of Heterogeneous Catalysts and Adsorbents" (Plyos, Ivanovo oblast, July 1-3, 2025)

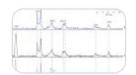
33 articles in this issue

Amounts of Reduced Metal on the Surfaces of Catalysts for the Liquid-Phase Hydrogenation of Unsaturated Hydrocarbons



IX ALL-RUSSIAN SCIENTIFIC CONFERENCE WITH INTERNATIONAL PARTICIPATION "CURRENT PROBLEMS OF THEORY AND PRACTICE OF HETEROGENEOUS CATALYSTS AND ADSORBENTS" 16 October 2025 | Pages: 2309 - 2314

Increasing the Efficiency of Adsorption of Cationic Dyes on Mechanoactivated Montmorillonite



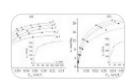
IX ALL-RUSSIAN SCIENTIFIC CONFERENCE WITH INTERNATIONAL PARTICIPATION "CURRENT PROBLEMS OF THEORY AND PRACTICE OF HETEROGENEOUS CATALYSTS AND ADSORBENTS" 16 October 2025 | Pages: 2315 - 2325

Crystallization of a Mullite Precursor Obtained by Combustion



IX ALL-RUSSIAN SCIENTIFIC CONFERENCE WITH INTERNATIONAL PARTICIPATION "CURRENT PROBLEMS OF THEORY AND PRACTICE OF HETEROGENEOUS CATALYSTS AND ADSORBENTS" 16 October 2025 | Pages: 2326 - 2334

Thermodynamics of Sorption of Cu(II) Cations from Aqueous Solutions by Hydrogel Sorbents Based on Cross-Linked Chitosan

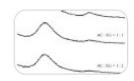


IX ALL-RUSSIAN SCIENTIFIC CONFERENCE WITH INTERNATIONAL PARTICIPATION "CURRENT PROBLEMS OF THEORY AND PRACTICE OF HETEROGENEOUS CATALYSTS AND ADSORBENTS" 16 October 2025 | Pages: 2335 - 2339

Acid-Base Properties of the Surface of Silicon Oxycarbide Composites

Based on Activated Carbon and Silica Gel and Their Effects on the

Adsorption of Dyes



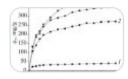
16 October 2025 | Pages: 2340 - 2345

Specific Features of Phenol Oxidation Kinetics in Plasma-Assisted Catalytic Processes

IX ALL-RUSSIAN SCIENTIFIC CONFERENCE WITH INTERNATIONAL PARTICIPATION "CURRENT PROBLEMS OF THEORY AND PRACTICE OF HETEROGENEOUS CATALYSTS AND ADSORBENTS"

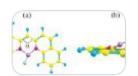
16 October 2025 | Pages: 2346 - 2350

Sorption of Copper(II) lons by a Composite Sorbent Based on Chitosan



IX ALL-RUSSIAN SCIENTIFIC CONFERENCE WITH INTERNATIONAL PARTICIPATION "CURRENT PROBLEMS OF THEORY AND PRACTICE OF HETEROGENEOUS CATALYSTS AND ADSORBENTS" 16 October 2025 | Pages: 2351 - 2359

Metal Complexes of 3-(Quinolin-2-ylmethylene)isoindolin-1-one:
Synthesis, Study of Spectral Characteristics by Experimental and
Theoretical Methods, and Electrocatalytic Properties



IX ALL-RUSSIAN SCIENTIFIC CONFERENCE WITH INTERNATIONAL PARTICIPATION "CURRENT PROBLEMS OF THEORY AND PRACTICE OF HETEROGENEOUS CATALYSTS AND ADSORBENTS" 16 October 2025 | Pages: 2360 - 2367

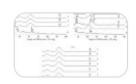
Influence of Processing Conditions on the Physicochemical Properties of Iron Oxides for the Production of Catalysts



IX ALL-RUSSIAN SCIENTIFIC CONFERENCE WITH INTERNATIONAL PARTICIPATION "CURRENT PROBLEMS OF THEORY AND PRACTICE OF HETEROGENEOUS CATALYSTS AND ADSORBENTS"

16 October 2025 | Pages: 2368 - 2375

Using Microwave Radiation to Intensify Crystallization in the Synthesis of ZSM-5 Type Zeolite



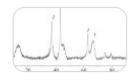
IX ALL-RUSSIAN SCIENTIFIC CONFERENCE WITH INTERNATIONAL PARTICIPATION "CURRENT PROBLEMS OF THEORY AND PRACTICE OF HETEROGENEOUS CATALYSTS AND ADSORBENTS" 16 October 2025 | Pages: 2376 - 2382

Electrodeposition of Tin–Nickel Alloys from Ammonium Oxalate Electrolytes



16 October 2025 | Pages: 2383 - 2388

Using IR Spectrometry and X-ray Diffractometry to Determine the Crystallinity of Supported Hydrogenation Catalysts



IX ALL-RUSSIAN SCIENTIFIC CONFERENCE WITH INTERNATIONAL PARTICIPATION "CURRENT PROBLEMS OF THEORY AND PRACTICE OF HETEROGENEOUS CATALYSTS AND ADSORBENTS"

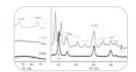
16 October 2025 | Pages: 2389 - 2394

Chemoinformatics Analysis of the Kinetics of Photodestruction of Acid AZO Dyes in Aqueous Solution



IX ALL-RUSSIAN SCIENTIFIC CONFERENCE WITH INTERNATIONAL PARTICIPATION "CURRENT PROBLEMS OF THEORY AND PRACTICE OF HETEROGENEOUS CATALYSTS AND ADSORBENTS" 16 October 2025 | Pages: 2395 - 2403

Xerogels and Nanopowders Al₂O₃–ZrO₂ and Al₂O₃–[ZrYb]O₂ for Sorption of Anions



IX ALL-RUSSIAN SCIENTIFIC CONFERENCE WITH INTERNATIONAL PARTICIPATION "CURRENT PROBLEMS OF THEORY AND PRACTICE OF HETEROGENEOUS CATALYSTS AND ADSORBENTS" 16 October 2025 | Pages: 2404 - 2410

Exploration of the Dioxouranium Complex LUO₂: 3D Supramolecular Architecture, Hirshfeld Surface Analysis, and Electrochemical Properties



PROBLEMS, TENDENCIES IN DEVELOPMENT, AND CHALLENGES IN PHYSICAL CHEMISTRY

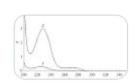
16 October 2025 | Pages: 2411 - 2422

Thermodynamic and Electrophysical Properties of New Neodymium and Lithium Nickelite-Manganite NdLi₂NiMnO₅

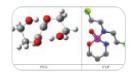


CHEMICAL THERMODYNAMICS AND THERMOCHEMISTRY | 16 October 2025 | Pages: 2423 - 2430

Precision Measurements of Benzoic Acid Dissociation Constants by Concentration Spectrophotometry

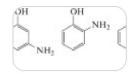


Cyclophosphamide Adsorption on the Surface of Polyethylene Glycol: A Computational Study



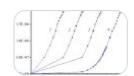
CHEMICAL THERMODYNAMICS AND THERMOCHEMISTRY | 16 October 2025 | Pages: 2439 - 2447

Thermochemistry of Semiconductor Molecules: Enthalpies of Dissolution, Solvation, and Evaporation for o-Phenylenediamine and ortho-, meta-, para-Hydroxy Aniline Compounds



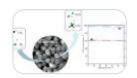
CHEMICAL THERMODYNAMICS AND THERMOCHEMISTRY | 16 October 2025 | Pages: 2448 - 2456

Kinetics of the Fenton Reaction



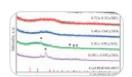
CHEMICAL KINETICS AND CATALYSIS | 16 October 2025 | Pages: 2457 - 2462

Promotion Effect of Ce Doping on Mesoporous Ni/KCC-1 Catalysts for CO₂ Hydrogenation to CH₄



CHEMICAL KINETICS AND CATALYSIS | 16 October 2025 | Pages: 2463 - 2472

<u>Preparation and Application of Cu–Ca/SiO₂ Catalyst in Dehydrogenation</u> of sec-Butanol



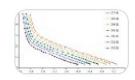
CHEMICAL KINETICS AND CATALYSIS | 16 October 2025 | Pages: 2473 - 2483

Facile Synthesis of CuO-Mn₂CuO₄ Composite Materials and Catalysis for Hydrogen Evolution from Water Electrolysis



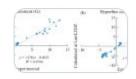
CHEMICAL KINETICS AND CATALYSIS | 16 October 2025 | Pages: 2484 - 2492

Effect of Ionic Strength on the Stability and Thermodynamic Properties of Rhenium(V) Complexes with *N*-Ethylthiourea



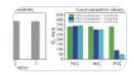
PHYSICAL CHEMISTRY OF SOLUTIONS | 16 October 2025 | Pages: 2493 - 2497

An Approach to Description of Isotropic Hyperfine Interaction Constants in the Fluorinated Nitrobenzene and Nitrophenol Radical Anions: DFT Calculations vs. Experiment



STRUCTURE OF MATTER AND QUANTUM CHEMISTRY | 16 October 2025 | Pages: 2498 - 2505

Sulfur-Containing Poly(phenol-amine) for Efficient Removal of Cr(VI) in Aqueous Environment

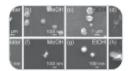


PHYSICAL CHEMISTRY OF NANOCLUSTERS, SUPRAMOLECULAR STRUCTURES, AND NANOMATERIALS

16 October 2025 | Pages: 2506 - 2515

Synergize Electron Localization-Interface Engineering to Precisely

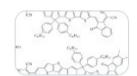
Assemble Ag Nanoparticles/Graphene/Cu with Surface-Enhanced Raman
Scattering



PHYSICAL CHEMISTRY OF NANOCLUSTERS, SUPRAMOLECULAR STRUCTURES, AND NANOMATERIALS

16 October 2025 | Pages: 2516 - 2522

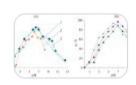
Enhanced Ultrafast Nonlinear Optical Properties of Cyclopentadiene-Thiophene-Fused Core Non-Fullerene Nanofilms via Benzene Ring Integration



PHYSICAL CHEMISTRY OF NANOCLUSTERS, SUPRAMOLECULAR STRUCTURES, AND NANOMATERIALS

16 October 2025 | Pages: 2523 - 2531

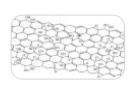
Patterns of the Heavy Metal Ions Sorption Process by a Coal-Mineral Sorbent Derived from Rice Husk



PHYSICAL CHEMISTRY OF DISPERSED SYSTEMS AND SURFACE PHENOMENA | 16 October 2025

Pages: 2532 - 2542

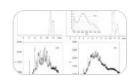
Synthesis and Efficacy Study of Graphene Oxide for Removal of Radioactive Iodine I-131 In Vitro and In Vivo



PHYSICAL CHEMISTRY OF DISPERSED SYSTEMS AND SURFACE PHENOMENA 16 October 2025

Pages: 2543 - 2557

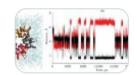
Identification of the Second-Generation Rodenticidal Substance "Bromadiolone" (Analytical Determination, Structural Features, and Rearrangement)



PHYSICAL CHEMISTRY OF SEPARATION PROCESSES. CHROMATOGRAPHY | 16 October 2025 |

Pages: 2558 - 2571

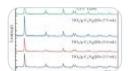
Classical and Entangled Two-Photon Absorption of Microbial Rhodopsin KR2 and Its Red-Shifted Mutant



PHOTOCHEMISTRY, MAGNETOCHEMISTRY, MECHANOCHEMISTRY | 16 October 2025 |

Pages: 2572 - 2582

TiO₂ Modified g-C₃N₄ Quantum Dots: Characteristics and Photocatalytic Performance for Removal of 2,4-Dichlorophenoxyacetic Acid



PHOTOCHEMISTRY, MAGNETOCHEMISTRY, MECHANOCHEMISTRY | 16 October 2025

Pages: 2583 - 2592