

ORIGINAL ARTICLES

Application of an Intelligent Optimization Method Based on Aspen Adsorption in the Purification Process of Helium Via Pressure Swing Adsorption

H. Lin · Z. Fan · G. Jing · H. Zhao · Y. Li 2329

Robust NH₂-UiO-66 for Efficient Cr(VI) Sequestration from Water

R. Zhao · L. Li · Y. Wang 2343

Alkali-Based Z₂TiGaH₆ (Z=Li, Na, K, Rb) Double Perovskites for Advanced Hydrogen Storage and Optoelectronic Applications

H. Murtaza · A.B.M. Ali · Q. Ain · I. Safra · A. Kumar · A.M. Ali · A.D. Oza · J. Munir 2357

Morphology-Dependent Uranium Adsorption on Zinc Oxide: Unraveling the Synergistic Role of Surface Area and Oxygen Vacancies

X. Zhang · D. Deng · C. Du · H. Zhang · X. Wang · Y. Cheng · J. Dong · L. Yuan 2371

Gold Nanocluster-Conjugated Magnetic Immunocomplexes for Quantitative Detection of C-Reactive Protein

B.-G. Kim · Y. Choi · S. Ryu · S. Lee · M. Park · H.B. Na 2385

Silk Fibroin-Regulated Biomimetic Mineralization of Ni(OH)₂ for Energy Storage Applications

S.K. Ramesh · S.W. Rhee · J. Kim 2395

Structural Transformation of Ho-Doped PbO₂ Anode Upon Flow Adaptation for Dye Removal

V. Fadeev · E. Korina · OlegBoishakov · I. Kodranov · M.M. Simić · D. Manojlović · D. Stanković 2411

Assessment of Metallic Reductants in the Processing of Cathode Materials from Spent Lithium-Ion Batteries: Emphasis on Aqueous and Non-aqueous Leaching Processes

K. Kurniawan · S. Kim 2427

Vanadium-Doped NiCoP Nanosheets for Enhanced Hydrogen Evolution Reaction in Alkaline Media

M.R. Kandel · P.P. Dhakal · C.C. Gudal · J.R. Thapa · K.R. Chapagain · I.B. Bhandari · K. Chhetri · C.-H. Chung 2443

Synergistic Antitumor Effects of Paclitaxel Combined with PDE5 Inhibitor Avanafil on Glioma U373 Cells

H. Aybek · M. Kırıcı · K. Koc · B. Tüzün · R. Gündoğdu · M.K. Erdoğan 2455

Simulation and Optimization Research of a Two-Stage Organic Rankine Cycle System Based on LNG Cold Energy Recovery

D. Jiao · Z. Zheng · Z. Lv 2477

One-Step Emulsification Enables High Loading of Hydrophobic Drugs, But Not Transdermal Delivery: Phase-Inversion-Driven Double and Single Emulsions Stabilized by Silica Nanoparticles

J. Lee · H.S. Shim · S.-B. Min · C.-Y. Heo · S.Q. Choi 2491

Cu-Fe Oxide Nanozymes with Enhanced Peroxidase-like Activity for Sensitive H₂O₂ Colorimetric Detection

P. Jiang · Y. Hao · M. Jia · C. Liu 2503

Continuous Flow Cobalt-mediated Radical Polymerization of Vinyl Acetate and Hydrolysis of Polyvinyl Acetate to get Polyvinyl Alcohol: Concurrent Control and Purification

M.S. Bashir · D. Liao · Z. Ziqiang · F. Wang 2515

Correlation Between Mass Transfer Coefficient, Solubility, and Yield in Paclitaxel Extraction from *Taxus chinensis*

G.-E. Ju · M.-J. Yeon · J.-H. Kim 2523

Colloidal WO_{2.72} Nanocrystals with Hexagonal Tunnels for Sodium-ion Supercapacitors

H. Jung · S. Lee · S. Ahn · S. Heo 2537

Preparation and Thermal Properties of Expanded Graphite-Ag Particle Composites under Supercritical CO₂ Process

O.R. Lee · W.G. Lee 2547

Regulating Zinc Nucleation via KOH-Etched and Cu-Coated Carbon Felt for Stable Zinc–Vanadium Redox Flow Batteries

S. Kang · J. Kim · E. Song · H. Shin · M. Park · M. Park 2557

(Contents continued on inside back cover)

Korean Journal of Chemical Engineering