

Volume 8 · Number 4 · August 2021



QK2137787

35-8293

CN 10-1252/TD

国际煤炭科学技术学报(英文)

# International Journal of Coal Science & Technology



Water, N, P, K



Springer Open

# International Journal of Coal Science & Technology

Volume 8 · Number 4 · August 2021

## REVIEW

**459 Electrochemical efficacies of coal derived nanocarbons**

R. Thomas · B. Manoj

## RESEARCH ARTICLES

**473 Arbuscular mycorrhizal symbiosis facilitates apricot seedling (*Prunus sibirica* L.) growth and photosynthesis in northwest China**

Y. Bi · L. Xie · Z. Wang · K. Wang · W. Liu · W. Xie

**483 Investigation of availability, demand, targets, and development of renewable energy in 2017–2050: a case study in Indonesia**

E. Erdiwansyah · M. Mahidin · H. Husin · N. Nasaruddin · K. Khairil · M. Zaki · J. Jalaluddin

**500 Study on the operating parameters of the 10 kW SOFC-CHP system with syngas**

B. Li · Z. Lyu · J. Zhu · M. Han · Z. Sun

**510 Use of petrological and organic geochemical data in determining hydrocarbon generation potential of coals: miocene coals of Malatya Basin (Eastern Anatolia-Turkey)**

N. Yalcin Erik · F. Ay

**534 Method for evaluation of the cleanliness grade of coal resources in the Huainan Coalfield, Anhui, China: a case study**

G. Hu · G. Liu · D. Wu · W. Zhang · B. Fu

**547 Coal-bearing strata sequence stratigraphy of Paleogene Meihe Formation, Meihe Basin, NE China**

Y. Bai · Q. Lü · Z. Liu · P. Sun · R. Liu · S. Yao

**562 Experimental study of coal fracture dynamics under the influence of cyclic freezing–thawing using shear elastic waves**

P.V. Nikolenko · S.A. Epshtein · V.L. Shkuratnik · P.S. Anufrenkova

**575 Cluster modeling of the short-range correlation of acoustically emitted scattering signals**

D. Xue · L. Lu · J. Zhou · L. Lu · Y. Liu

**590 Effective thermal conductivity in granular media with devolatilization: the Lattice Boltzmann modelling**

A. Grucelski

**605 Relationship between rock uniaxial compressive strength and digital core drilling parameters and its forecast method**

H. Gao · Q. Wang · B. Jiang · P. Zhang · Z. Jiang · Y. Wang

**614 Breaking and mining-induced stress evolution of overlying strata in the working face of a steeply dipping coal seam**

X. Chi · K. Yang · Z. Wei

**626 A physical model study of surrounding rock failure near a fault under the influence of footwall coal mining**

S. Zhang · L. Lu · Z. Wang · S. Wang

Contents continued on inside back cover

ISSN 2095-8293

CODEN IJCSQT

In China: RMB ¥ 58.00

Other regions: US \$ 60.00



9 772095 829217

**Contents continued from back cover**

- 641 Longwall top coal caving design for thick coal seam in very poor strength surrounding strata**  
H. Jangara · C.A. Ozturk
- 659 Combined support mechanism of rock bolts and anchor cables for adjacent roadways in the external staggered split-level panel layout**  
A. Batugin · Z. Wang · Z. Su · S.S. Sidikovna
- 674 Active protection of work area against explosion of dust–gas mixture**  
Z. Szkudlarek · S. Janas
- 685 Near-source characteristics of two-phase gas–solid outbursts in roadways**  
A. Zhou · M. Zhang · K. Wang · D. Elsworth
- 697 Physicochemical, mineralogy, and thermo-kinetic characterisation of newly discovered Nigerian coals under pyrolysis and combustion conditions**  
B.B. Nyakuma · A. Jauro · S.A. Akinyemi · H.M. Faizal · M.B. Nasirudeen · M.A.H.M. Fuad · O. Oladokun
- 717 Beneficiation of coal using supercritical water and carbon dioxide extraction: sulfur removal**  
M.J. DeCuir · R.B. Gupta · B. Sastri
- 727 Recovery of vanadium and tungsten from waste selective catalytic reduction catalysts by  $K_2CO_3$  roasting and water leaching followed by  $CaCl_2$  precipitation**  
X. Liu · Q. Yang
- 737 Design and development of a machine vision system using artificial neural network-based algorithm for automated coal characterization**  
A.K. Gorai · S. Raval · A.K. Patel · S. Chatterjee · T. Gautam
- 756 Effects of acid drainage from abandoned coal mines on the microbial community of Shandi River sediment, Shanxi Province**  
D. Chen · Q. Feng · W. Li · Y. Song · C. Zhao
- 767 Facultative-anaerobic microbial digestion of coal preparation waste and use of effluent solids to enhance plant growth in a sandy soil**  
P.H. Fallgren · L. Chen · M. Peng · M.A. Urynowicz · S. Jin
- 780 Characteristics of leaching of heavy metals from low-sulfur coal gangue under different conditions**  
C. Li · L. Zheng · C. Jiang · X. Chen · S. Ding
- 790 Selected ions and major and trace elements as contaminants in coal-waste dump water from the Lower and Upper Silesian Coal Basins (Poland)**  
L. Lewińska-Preis · E. Szram · M.J. Fabiańska · Á. Nádudvari · M. Misz-Kennan · A. Abramowicz · Ł. Kruszewski · A. Kita

CORRECTION

- 815 Correction to: Beneficiation of coal using supercritical water and carbon dioxide extraction: sulfur removal**  
M.J. DeCuir · R.B. Gupta · B. Sastri

Further articles can be found at [link.springer.com](http://link.springer.com)

Instructions for Authors for *Int J Coal Sci Technol* are available at [www.springer.com/40789](http://www.springer.com/40789)

# International Journal of Coal Science & Technology

Volume 8 · Number 4 · August 2021

## REVIEW

**459 Electrochemical efficacies of coal derived nanocarbons**

R. Thomas · B. Manoj

## RESEARCH ARTICLES

**473 Arbuscular mycorrhizal symbiosis facilitates apricot seedling (*Prunus sibirica* L.) growth and photosynthesis in northwest China**

Y. Bi · L. Xie · Z. Wang · K. Wang · W. Liu · W. Xie

**483 Investigation of availability, demand, targets, and development of renewable energy in 2017–2050: a case study in Indonesia**

E. Erdiwansyah · M. Mahidin · H. Husin · N. Nasaruddin · K. Khairil · M. Zaki · J. Jalaluddin

**500 Study on the operating parameters of the 10 kW SOFC-CHP system with syngas**

B. Li · Z. Lyu · J. Zhu · M. Han · Z. Sun

**510 Use of petrological and organic geochemical data in determining hydrocarbon generation potential of coals: miocene coals of Malatya Basin (Eastern Anatolia-Turkey)**

N. Yalcin Erik · F. Ay

**534 Method for evaluation of the cleanliness grade of coal resources in the Huainan Coalfield, Anhui, China: a case study**

G. Hu · G. Liu · D. Wu · W. Zhang · B. Fu

**547 Coal-bearing strata sequence stratigraphy of Paleogene Meihe Formation, Meihe Basin, NE China**

Y. Bai · Q. Lü · Z. Liu · P. Sun · R. Liu · S. Yao

**562 Experimental study of coal fracture dynamics under the influence of cyclic freezing–thawing using shear elastic waves**

P.V. Nikolenko · S.A. Epshtein · V.L. Shkuratnik · P.S. Anufrenkova

**575 Cluster modeling of the short-range correlation of acoustically emitted scattering signals**

D. Xue · L. Lu · J. Zhou · L. Lu · Y. Liu

**590 Effective thermal conductivity in granular media with devolatilization: the Lattice Boltzmann modelling**

A. Grucelski

**605 Relationship between rock uniaxial compressive strength and digital core drilling parameters and its forecast method**

H. Gao · Q. Wang · B. Jiang · P. Zhang · Z. Jiang · Y. Wang

**614 Breaking and mining-induced stress evolution of overlying strata in the working face of a steeply dipping coal seam**

X. Chi · K. Yang · Z. Wei

**626 A physical model study of surrounding rock failure near a fault under the influence of footwall coal mining**

S. Zhang · L. Lu · Z. Wang · S. Wang

Contents continued on inside back cover

ISSN 2095-8293

CODEN IJCSQT

In China: RMB ¥ 58.00

Other regions: US \$ 60.00



9 772095 829217