

C O N T E N T S

Essay

- Prospects for the Future of Japan Institute of Energy K. YAMAJI ... (357)
Light and Shadow Y. ITAYA ... (358)

Special Articles: Recycling of Earthquake and Tsunami Disaster Wastes

(Reviews)

- Characteristics of Disaster Waste and Problems in Its Treatment Process
..... M. TAKATA ... (359)
An Overview and Problem about the Recycling of the Debris due to the Huge Natural Disaster
..... M. HISADA ... (368)
The Cement Recycling of the Earthquake Disaster Debris by Hachinohe Cement Co., Ltd.
..... M. KATAOKA ... (381)
Learned Recycling from Disaster
..... T. SUZUKI ... (388)
Trial and Actual Construction on Creation of Artificial Ground by Recycling Tsunami Sludge
..... H. TAKAHASHI ... (396)

Special Articles: Development of Next-generation IGCC with CO₂ Capture, Oxy-fuel IGCC II

(Reviews)

- Numerical Simulation of Coal Gasifier for Oxy-Fuel IGCC System
..... K. TANNO, H. WATANABE, H. MAKINO ... (403)
Numerical Simulation on Heat and Mass Transfer in Coal Gasifier under CO₂/O₂/N₂ atmosphere
..... K. NAKASO, A. M. SAIFUL, A. T. WIJAYANTA, J. FUKAI ... (413)
Characteristics of Gas Phase Reactions of Aromatic Hydrocarbons under Conditions
 Simulating a Reducing Section of an Entrained Flow Coal Gasifier
..... Y. SAKURAI, K. NORINAGA, S. KUDO, J. HAYASHI ... (421)
Estimation of Mass Transfer Rate of Oxidant to the Char Particle Surface with Oxidation Reaction
 and Its Application to the O₂/CO₂ System
..... Y. MATSUSHITA, K. YOSHIDA, S. AKAOTSU, J. TANIMOTO, T. SOMA, Y. SAITO, H. AOKI, T. MIURA ... (428)
Multi-Nuclear Solid-State NMR Analyses of Microstructure of Various Coal Ashes and Slags
 and the Correlation with the Melting Behaviors
..... J. MIYAWAKI, X. LIN, Y. JIANG, K. IDETA, H. TAKEBE, I. MOCHIDA, S.-H. YOON ... (436)
Viscosity Characteristics of Molten Slag for Next-generation IGCC
..... H. TAKEBE, A. TSURUDA, A. OKADA, K. UEDA ... (450)
Numerical Simulations of Molten Slug from Gas Furnace of IGCC
..... Y. MATSUKUMA ... (455)
Upgrading and CO₂ Gasification of Low Quality Carbonaceous Materials
..... M. NONAKA, T. HIRAJIMA ... (460)

Lecture Note

Unconventional Natural Gas (4)

Shale Gas IV The Technology of Shale Gas Development M. ISHITOBI, O. ISHIZAKI, K. TAKANO ... (468)

Abstract of the refereed papers

(Vol. 94, No. 4)

Study on Information Transmission Structure of Environmental Terms by Graphical Modeling Analysis

..... S. UEDA, H. YAGITA ... (474)

Economic Valuation of Clean Air in Beijing

..... N. NOMURA, Y. GENCHI ... (475)

Development of Quality Control Indexes of Feedstock for Cellulosic Bioethanol Production

..... A. AKIYAMA, T. SUZUKI, M. NIWA, Y. IGUCHI, A. FUKUDA, S. MIHASHI ... (476)

(Vol. 94, No. 5)

Evaluation of Palm Kernel Shell Charcoal for Blast Furnace Injection

..... H. TSURUTA, M. ASANUMA, A. MURAO, A. FUJIBAYASHI ... (477)

The Higher Heating Value (HHV) Estimation Method for Biomass Crops and Differences in HHV among Species

..... I. HATTORI, N. UWATOKO, M. GAU, N. KATO ... (478)

Beneficial Use of LCA for Decision-Making of Local Biomass Projects

..... A. HEIHO, H. HONDO ... (479)

~~~~~  
Entropy ..... (480)      JIE Calendar ..... (481)

Bulletin Board ..... (482)      From the Editors ..... (485)  
~~~~~