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## Okinawa Prefectural Municipal Autonomy Hall, Naha, Japan



The Society of Chemical Engineers, Japan Korean Institute of Chemical Engineers Thammasat University, Thailand <sup>1</sup>Department of Chemistry, Faculty of Science and Technology, Thammasat University, Thailand

<sup>2</sup>Frontier Laboratories Ltd., Japan

#### B11 Enhancing carbonation efficiency of coal fly ash via alkaline activator

#### for carbon mineralization

Seohui Jeon, Purnaning Tuwuh Triwigati, Gyudae Sim, Dongju Seo and

Youngjune Park

School of Environment and Energy Engineering, Gwangju Institute of

Science and Technology, Korea

## B12 Economic evaluation of a supply chain to produce biochar from fruit tree pruned branches

Taiyo Azuma<sup>1</sup>, Kazuo Matsuyama<sup>2</sup> and Ken-Ichiro Sotowa<sup>1</sup>

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<sup>2</sup>Office of Institutional Advancement and Communications, Kyoto University, Japan

#### B13 Removal of fluorine by adsorption with inorganic adsorbent

Naoyuki Shinohara, Syouhei Nishihama and Kazuharu Yoshizuka

Department of Chemical and Environmental Engineering, The University of Kitakyushu, Japan

## B14 Preparation and characterization of carbon-based materials from lignin-ammonium nitrate mixtures

Momoko Sugiyama<sup>1</sup>, Kento Shiota<sup>2</sup>, Naoki Yoshihara<sup>2</sup>, Eiko Higashi<sup>2</sup>,

Katsumi Katoh<sup>2</sup> and Takafumi Kato<sup>2</sup>

<sup>1</sup>Graduate School of Engineering, Fukuoka University, Japan

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#### B15 Production of valuable chemical materials via the catalytic pyrolysis of e-wastes

Hye-rim Son<sup>1</sup>, Sumin Pyo<sup>2</sup>, Siyoung Q. Choi<sup>2</sup> and Young-Kwon Park<sup>1</sup>

<sup>1</sup>School of Environmental Engineering, University of Seoul, Korea

<sup>2</sup>Department of Chemical and Biomolecular Engineering, KAIST, Korea

## **B16** Removal of phosphate from water by activated carbon loaded with lanthanum hydroxide

Hiroto Shiratsuchi, Syouhei Nishihama and Kazuharu Yoshizuka

Department of Chemical and Environmental Engineering, The University of Kitakyushu, Japan

## B17 Improved biohydrogen production using Ni/Zr<sub>x</sub>Ce<sub>y</sub>O<sub>2</sub> catalyst in the steam gasification of sewage sludge in foam reactor

Haneul Shim, Behzad Valizadeh, Sejin Hwang and Young-Kwon Park School of Environmental Engineering, University of Seoul, Korea

#### B18 An efficient recycling of precious metals from automotive catalysts using