D: Adsorption

[Oral Session] (Day 2 – Friday, October 31st, 13:30-17:10)

DO-01 13:30-13:50
Selective Adsorbent of Precious Metal Ions using Imidazole-Functionalized SBA-15
T. KANG, K. R. LEE, Y. PARK, K. CHOI, J. S. LEE and Jongheop YI* (Seoul National University, Korea)

DO-02 13:50-14:10
Temperature-Swing Adsorption of Palladium(ii) In Hydrochloric Acid by N-Isopropylacrylamide Copolymer Gel
Shintaro MORISADA*, Yuusuke MAEDA, Hidetaka KAWAKITA and Keisuke OHTO (Saga University, Japan)

DO-03 14:10-14:30
Adsorption-Desorption of VOCs over Zeolite with Catalytic Oxidation using MnOx/TiO2 Catalyst
Hyounduk JUNG, Minsu KIM, Eunseuk PARK and Jongsoo JURNG*
(Korea Institute of Science and Technology, Korea)

DO-04 14:30-14:50
Development of PSA System for the Recovery of Carbon Dioxide from Blast Furnace Gas in Steel Works
Hitoshi SAIMA[1]*, Yasuhiro MOGI[2], Takashi HARAOKA[2] and Nobuyuki SHIGAKI[2]
(1 Kyushu University, 2 Steel Research Labs. JFE Steel Corp., Japan)

DO-05 14:50-15:10
Na-Mg Double Salt Based Sorbent for High-Temperature CO_2 Capture
Chan Hyun LEE and Ki Bong LEE* (Korea University, Korea)

DO-06 15:10-15:30
Mesoporous Silica Functionalized with Polyamines for CO_2 Adsorption
Duc Sy DAO[1,3]*, Hidetaka YAMADA[1,2] and Katsunori YOGO[1,2]*
(1 Nara Institute of Science and Technology, Japan, 2 Research Institute of Innovative Technology for the Earth, Japan, 3 Hanoi University of Science, Vietnam)

[15:30-15:50] Coffee Break

DO-07 15:50-16:10
Water Adsorption-Desorption Behavior on Mesoporous Silica around Freezing Point
Akira ENDO[1,3]*, Kyohei YAMASHITA[2,3], Hirofumi DAIGUJI[2,3]
(1 National Institute of Advanced Industrial Science and Technology, Japan,
2 The University of Tokyo, Japan, 3 CREST, Japan Science and Technology Agency, Japan)

DO-08 16:10-16:30
Development of Dimethy carbnate (DMC) Synthesis Process via Vapor Phase Oxdative Carbonylation using Adsorptive Cu-based Catalysts
Jong-Ho MOON*, Nansuk YOU, Ji-Bong JOO, Young Cheol PARK, Hyunuk KIM, Dong-Hyuk CHUN and Dong-Woo CHO (Korea Institute of Energy Research, Korea)

DO-09 16:30-16:50
Water Adsorption Properties of Alkali Treated ZSM-5 Zeolites
Masahiro KATOH*, Ayaka SATOH, Michisato KIMURA, Keizo NAKAGAWA and Shigeru SUGIYAMA
(The University of Tokushima, Japan)

DO-10 16:50-17:10
Nanoporous Metal-Organic Frameworks for Adsorptive Separations of Xenon/Krypton Mixtures
Youn-Sang BAE* (Yonsei University, Korea)

[Poster Session] (Day 3 – Saturday, November 1st, 9:00-11:00 / 11:20-13:00)

DP-01 Preparation of Binary Mixed Self-Assembled Monolayers for the Kinetically Enhanced Adsorption of Platinum Ion
J. MOON, T. KANG, S. OH, I. CHOI, S. HONG and Jongheop YI* (Seoul National University, Korea)

DP-02 MD Simulation Concerning Liquid-Phase Purine Adsorption into Slit Pores of Activated Carbons
Tetsuo SUZUKI*, Masashi SAWADA and Hajime TAMON (Kyoto University, Japan)

DP-03 Characterization of Selective Adsorption Behavior of L-Amino Acid on Liposome Membrane
Takaaki ISHIGAMI, Keishi SUGA and Hiroshi UMAKOSHI* (Osaka University, Japan)

DP-04 Selective Adsorption of Anionic Dye in an Aqueous Solution using Polyelectrolyte-Functionalized Mesoporous Silica
J. B. JOO, J. C. PARK and Jongheop YI* (Seoul National University, Korea)

DP-05 Synthesis and Characterization of Ionic Polymer-Fe Ion Complex Gels and Their Phosphate Adsorption
Yoshimi SEIDA (Toyo University, Japan)

DP-06 Removal of Divalent Cation Species Including Radioactive Elements by Co-Precipitation and/or Adsorption onto CaO-SiO_2-H_2O Cement Hydrate
Tetsuyuki TANIAI[1]*, Naomitsu TSUYUKI[2] and Hiroshi SAKAMAKI[3]
(1 Chiba Institute of Technology, Japan, 2 Nihon material engineering laboratory, Japan, 3 Nihon University, Japan)

DP-07 Preparation of Thiol-Functionalized Mesoporous Silica for the Selective Adsorption of Pt^{2+} and Pd^{2+}
T. KANG, C. K. SONG, Y. PARK and Jongheop YI* (Seoul National University, Korea)

DP-08 Fabrication of Organic Substrate and Investigation of Adsorption Behavior of Bisphenol A via Surface Plasmon Resonance Spectroscopy
J. MOON, Y. G. YOO, S. OH, T. KANG, S. HONG and Jongheop YI* (Seoul National University, Korea)

DP-09 Effect of Side-Chain Length of Hydrophobic Component in PH-Responsive Copolymer on Bisphenol-A Adsorption
Koji TERAMOTO, Toshiyuki HARADA and Shuji SAKOHARA* (Hiroshima University, Japan)

DP-10 Adsorptive Recovery of Radioactive Cesium from Contaminated Soil
Akiyoshi SAKODA[1]*, Yusuke TAKAHASHI[1], Takao FUJII[1], Nagayoshi SHIMA[2], Kazuyoshi ISHII[1], Kazuaki KUDO[1], Tetsu TATSUMA[1], Hirotaka FUJITA[1] and Michio SATO[2]
(1 The University of Tokyo, Japan, 2 Fukushima University, Japan)

DP-11 Three-Dimentionally Architectured Graphene for Liquid and Gas Capture
Ho Seok PARK* (Kyung Hee University, Korea)

DP-12 Study on Crystallization of Zeolitic Imidazolate Framework-8 in Aqueous Medium
Kosuke FUJITA[1], Yoshikazu MIYAKE[1,2], Koji KIDA[3], Gino V. BARON[4], Joeri F. M. DENAYER[4] and Shunsuke TANAKA[1,2]*
(1 Kansai University, Japan, 2 Organization for Research and Development of Innovative Science and Technology, Japan, 3 Research Institute of Innovative Technology for the Earth, Japan, 4 Vrije Universiteit Brussel, Belgium)

DP-13 Hierarchical Zeolitic Imidazolate Framework-8 Prepared by Mechanochemical Method
Aya YASUYOSHI[1], Tatsuichiro NISHIYAMA[1], Takuya NAGAOKA[1], Yoshikazu MIYAKE[1,2], Koji KIDA[3], Chie ABE[4], Yasuhisa HASEGAWA[4], Joeri F. M. DENAYER[5] and Shunsuke TANAKA[1,2]*
(1 Kansai University, Japan, 2 Organization for Research and Development of Innovative Science and Technology, Japan, 3 Research Institute of Innovative Technology for the Earth, Japan, 4 Research Center for Compact Chemical System, National Institute of Advanced Industrial Science and Technology, Japan, 5 Vrije Universiteit Brussel, Belgium)

DP-14 Adsorption of Nitrate on Amine Grafted Silica Materials, MCM-48 and SBA-15
Ji Yoon KIM, Sung Chul RYU, Wang Geun SHIM and Hee MOON* (Chonnam National University, Korea)

DP-15 Characterization of Interaction and Adsorption Properties of Protein on Artificial Dialysis Membrane
Yuri CHIKAYAMA[1], Yoshiyuki UENO[2], Hiroshi TAKAHASHI[2], Hiroaki FUJIEDA[2], Miwa TOKUYAMA[2], Keita HAYASHI[1] and Hidemi NAKAMURA[1]*
(1 National Institute of Technology, Nara College, 2 Toray Industries, Inc., Japan)

DP-16 Preparation of Chitosan Gel Microparticles using Size-Controlled Emulsions and Evaluation of Their Adsorptive Separation Properties
Kaori SAITO, Takashi KUROIWA* and Akihiko KANAZAWA (Tokyo City University, Japan)

DP-17 Acetaldehydes in Indoor Air: Absorption and Catalytic Oxidation using $MnNO_x/TiO_2$ Honeycomb-Catalyst
Minsu KIM, Eunseuk PARK, Hyounduk JUNG and Jongsoo JURNG*
(Korea Institute of Science and Technology, Korea)

DP-18 Experimental Investigation on SO_2 Purification Performance of Dry-DeSO_x Filter for Optimizing Filter Design
Kousuke DODO[1], Yugo OSAKA[1]*, Takuya TSUJIGUCHI[1], Akio KODAMA[1], Hongyu HUANG[2] and Xuecheng LIU[2] (1 Kanazawa University, Japan, 2 Chinese Academy of Science, China)

DP-19 Preparation of Flexible Zinc Oxide/Carbon Nanofiber Webs for Mid-Temperature Desulfurizaiton
Hyo-Been IM, Soon-Jin KWON, Han-Ik JOH, Sungho LEE* and Kwang Bok YI*
(Chungnam National University, Korea)

DP-20 Synthesis of Zeolite Monolith with Hierarchical Pore Structure by Unidirectional Freezing and Steam-Assisted Crystallization
Hajime TAMON*, Tatsuhiko NORIMOTO and Noriaki SANO (Kyoto University, Japan)

DP-21 Preparation of Carbon Cryogel Microhoneycomb from Phenol and Formaldehyde by Ice-Templating
Ryouichi MORIYA, Shuhei OKUMURA, Noriaki SANO and Hajime TAMON* (Kyoto University, Japan)

DP-22 Activated Carbon Fiber and Its Test Method on Japanese Industrial Standard (JIS)
Masaaki YOSHIKAWA[1]* and Hajime TAMON[2] (1 Osaka Gas co., ltd, Japan, 2 Kyoto University, Japan)

DP-23 Porous Metal Carboxylates as a New Class of Multifunctional Adsorbent Material
U-Hwang LEE*, Young Kyu HWANG, Dong Won HWANG, Jeong-Kwon SUH and Jong-San CHANG
(Korea Research Institute of Chemical Technology, Korea)

DP-24 Preparation of the Biomass Activated Carbon by using the Superheated Steam
Noboru KISHIMOTO* and Shin ITANI (National Institute of Technology, Wakayama College, Japan)

DP-25 A Decreasing Technique of Micro Pore Volume within Synthetic Resin Particles
Tomohiro KINOSHITA[1]*, Takashi KAWAKITA[2] and Eiji FURUYA[1]
(1 Meiji University, Japan, 2 Zenkosha Co., Ltd., Japan)

DP-26 Synthesis of Carbon Nanohonrs with Metallic Nanoparticles and Enhancement of Porosity with Controlled Particle Property
Noriaki SANO*, Daisuke HIRAMA, Tatporn SUNTORNLOHANAKUL, Chantamanee POONJARERNSILP and Hajime TAMON (Kyoto University, Japan)

DP-27 Preparation of CO_2 Adsorption of APS-Modified Silica Gel Adsorbent by One-Step Process
Chang Hun LEE, Hyunchul JUNG, Dong Hyun JO, Dong Kun SHIN and Sung Hyun KIM*
(Korea University, Korea)

DP-28 Synthesis of Carbon Nanohorns Dispersed with Iron Nanoparticles for Preparation of Solid Base Catalyst
Kohei YAMADA, Noriaki SANO* and Hajime TAMON (Kyoto University, Japan)

DP-29 Preparation of Carbon Microhoneycombs having Large Mesopore Volumes using Dextran
Shinichiroh IWAMURA*, Kohei KITANO, Isao OGINO and Shin R. MUKAI (Hokkaido University, Japan)

DP-30 Effect of Amine Functionalization Method on CO_2 Adsorption in Silica Gel Sorbents
Hyunchul JUNG, Chang Hun LEE, Dong Hyun JO, Dongkun SHIN and Sung Hyun KIM*
(Korea University, Korea)

DP-31 Adsorption Removal of CO_2 in Biogas by LSX Zeolites
Yuji HASEGAWA and Akihiko MATSUMOTO* (Toyohashi University of Technology, Japan)

DP-32 Adsorptive Removal of CO_2 from Natural Gas using a Metal Organic Framework
Hyung Chul YOON, Phani Braham RALLAPALI, Sang Sup HAN, Beum Hee TAE, Taesung JUNG, Dong Woo CHO and Jong-Nam KIM* (Korea Institute of Energy Research, Korea)

DP-33 Separation of a Simulated Biogas containing Water Vapor by VSA
Takuya TSUJIGUCHI, Yuichi MIYASHITA, Yugo OSAKA and Akio KODAMA* (Kanazawa University, Japan)

DP-34 Molecular Simulation Study of Sorption Mechanism of CO_2 and Li_4SiO_4
Gwan Yeong JUNG and Sang Kyu KWAK* (Ulsan National Institute of Science and Technology, Korea)

DP-35 Modeling of molecular sieving carbon using non-equilibrium CVD simulation and characterization of its gas separation property
Yasuyuki YAMANE[1], Hideki TANAKA[1], Akira MAKI[1], Taira ADACHI[1], Yasunori KUNIMOTO[2] and Minoru T. MIYAHARA[1]* (1 Kyoto University, Japan, 2 Japan EnviroChemicals, Ltd., Japan)

DP-36 CO_2 Adsorption on Carbonized Polyvinylidene Fluoride
Seok-Min HONG, Ki Bong LEE* (Korea University, Korea)

DP-37 Hydrogen Adsorption in Zeolite-Templated Carbon Decorated with Transition-Metal Nanoparticles
Hirotomo NISHIHARA[1]*, Fumihide OHTAKE[1], Hiroyuki ITOI[2], Masashi ITO[3], Takashi KYOTANI[1]
(1 Tohoku University, Japan, 2 Aichi Institute of Technology, Japan, 3 Nissan Motor Co., Ltd., Japan)

DP-38 CO_2 Sorption by MgO Sorbent Promoted with Alkali Salt at Intermediate Temperatures
Anh-Tuan VU, Keon HO and Chang-Ha LEE* (Yonsei University, Korea)

DP-39 The Appropriate Enrichment of Perfluorinated Compounds (PFCs) using Pressure Swing Adsorption Process
Jong-Ho PARK*, Dong Woo CHO, Tae Sung JUNG and Jongkee PARK
(Korea Institute of Energy Research, Korea)

DP-40 Feedcol Strategy on SMB Chromatography with Unbalanced Column Configuration
Ji-Yeon SONG and Chang-Ha LEE* (Yonsei University, Korea)

DP-41 Application of Simulated-Moving Bed (SMB) to Conventional Petrochemical Plants
Young-Il LIM* and Truong Xuan DO (Hankyong National University, Korea)

DP-42 Evaluation of Gas Separation Property from Mixture Gas Adsorption Measurement
Kazuyuki NAKAI, Yoshikazu SENGA, Kazuki TAKAGI, Haruo IEGAMI and Kaori NAKAMURA
(BEL Japan, Inc., Japan)

DP-43 Experimental Investigation on Heat and Mass Transfer Behavior in Silica-Gel Layer by Volumetric Method
Yugo OSAKA[1]*, Kazuya NARUMIYA[1], Takuya TSUJIGUCHI[1], Akio KODAMA[1], Hongyu HUANG[2] and Zhaohong HE[2] (1 Kanazawa University, Japan, 2 Chinese Academy of Science, China)