

CARBON 2008 Conference Program Oral

Oral Sessions

MONDAY, JULY 14, 2008

14AM1 Metropolitan

8:20 – 9:00 Asama B, C OPENING CEREMONY
Conference Chairs Morinobu Endo (Shinshu Univ., Japan)

Chair: Dr. Noriko Yoshizawa (AIST, Japan)

9:00 – 9:50 Asama B, C PLENARY LECTURE
Professor Takashi Kyotani (Tohoku Univ., Japan)
“Templated Carbons - Nanostructure and Functions”
Chair: Prof. L. Radovic (Penn. State University, USA)

9:50 – 10:20 BREAK Metropolitan Lobby 3F, Asama B, Lobby 2F, Sunroute Lobby 3F

14AM2 (ORAL SESSION 1)

Session A

Metropolitan Room Asama A

BIOLOGICAL AND MEDICAL APPLICATIONS

Chairs: Prof. Robert Hurt (Brown Univ., USA)

Prof. Shozo Koyama (Shinshu Univ., Japan)

14A-am-01 10:20 – 10:50 KEYNOTE LECTURE

Biological (Immunological) Responses and Medical Application of Carbon Nanotube

Prof. Shozo Koyama (Shinshu Univ., Japan) 1

14A-am-02 10:50 – 11:10

Chemical Modification of Nanodiamond Surface Aiming at Medicinal and Biological Applications

Naoki Komatsu¹, Tatsuya Takimoto¹, Takahide Kimura¹, Masahito Morita¹, Toshiro Inubushi¹ (¹Shiga Univ. of Medical Science, Japan) 1

14A-am-03

(Withdrawn)

14A-am-04 11:10 – 11:30

Targeted Removal of Bioavailable Metal as a Detoxification Strategy for Carbon Nanotubes

Robert H. Hurt¹, Xinyuan Liu¹, Lin Guo¹, Daniel Morris¹, Agnes Kane¹ (¹Brown Univ., USA) 2

14A-am-05 11:30 – 11:50

Application of Granular Carbon Materials on Micro-contaminations Removal: Case Study

Chuan Chi Chien¹, Chih Ming Kao², Ying Pin Huang¹, Ching Hui Chang¹ (¹Industrial Technology Research Institute, Taiwan) (²National Sun Yat-Sen Univ., Taiwan) 3

14A-am-06 11:50 – 12:10

Water-dispersible Carbon Nano Test Tubes Including Magnetic Particles ~Towards the Application to Magnetically Targeted Drug Delivery System~

Hironori Oriaka¹, Somlak Ittisanronnachai¹, Xiao-Hui Wang¹, Nobuhiro Inokuma¹, Takashi Kyotani¹, Yoshihiro Uozu² (¹Tohoku Univ., Japan) (²Mitsubishi Rayon Co., LTD., Japan) 3

12:30 – 13:30 LUNCH

Metropolitan Asama B, C and Chikuma

Session B

Metropolitan Room Azusa

ELECTROCHEMISTRY, BATTERIES AND CAPACITORS

Chairs: Dr. Yong Jung Kim (Shinshu Univ., Japan)

Prof. Soshi Shiraishi (Gunma Univ., Japan)

14B-am-01 10:20 – 10:50 FEATURED LECTURE

Nanoporous Carbons for Electric Double Layer Capacitor ~Not Only Capacitance but Also Voltage~
Prof. Soshi Shiraishi (Gunma Univ., Japan) 4

14B-am-02 10:50 – 11:10

Preparation and Characterization of W and Mo Carbides/Carbon Composites with High Specific Surface Area

Yasushi Soneda¹, Wei Liu¹, Junya Yamashita¹, Masaya Kodama¹, Hiroaki Hatori¹ (¹National Institute of Advanced Industrial Science and Technology (AIST), Japan) 4

14B-am-03 11:10 – 11:30

Correlations between Chemical Structure, Porosity and High Capacitance of AMN Materials

Olga Drozdova¹, Jiping Ye¹, Masayuki Kawaguchi² (¹Nissan Co., Ltd., Japan) (²Osaka Electro. Univ., Japan) 5

14B-am-04 11:30 – 11:50

Effect of Nitrogen and Boron Doping on EDLC Characteristics of Ordered Porous Carbon Materials

Taeri Kwon¹, Hirotomo Nishihara¹, Yu Fukura¹, Taichi Kogure¹, Peng-Xiang Hou¹, Quan-Hong Yang², Takashi Kyotani¹ (¹Tohoku Univ., Japan) (²Tianjin Univ., China) 5

14B-am-05 11:50 – 12:10

EDLC Properties of Novel Type of Phenolic Resin Including Nitrogen Functionality by Using KOH Activation

Yong Jung Kim¹, Masaaki Kitani¹, Tsuyoshi Kodama¹, Keita Higuchi¹, Naohiro Aoyama¹, Takayuki Oka¹, Akane Kobayashi¹, Morinobu Endo¹ (¹Shinshu Univ., Japan) 6

12:30 – 13:30 LUNCH

Metropolitan Asama B, C and Chikuma

CARBON 2008 Conference Program Oral

Oral Sessions MONDAY, JULY 14, 2008

14PM1 (ORAL SESSION 2)

Session A

Metropolitan Room Asama A

INDUSTRIAL APPLICATIONS

Chairs: Mr. Jock W. H. Smith (Dalhousie Univ., Canada)

Prof. Toru MAEKAWA (Toyo Univ., Japan)

14A-pm-01 13:30 – 14:00 FEATURED LECTURE

Carbon Materials for Electromagnetic Interference Shielding

Dr. Yasuhiro Yamada¹, Deborah Chung² (¹National Institute of Advanced Industrial Science and Technology (AIST), Japan) (²State Univ. of New York at Buffalo, USA) 6

14A-pm-02 14:00 – 14:30 FEATURED LECTURE

Bulk Isotropic Pyrolytic Carbon – A High Performance Material for Mechanical Sealing

Jun-Feng Wu¹, Shuo Bai¹, Hong-Jun Xu¹, Xu-Ke Zhou¹, Chuan Luo¹, Prof. Hui-Ming Cheng¹ (¹Chinese Academy of Sciences, China) 7

14A-pm-03 14:30 – 14:50

The Properties of Basic Copper Carbonate Based Impregnation Recipes for the Optimization of Respirator Carbons

Jock W. H. Smith¹, Jeff Dahn¹, Philippe Westreich¹ (¹Dalhousie Univ., Canada) 7

14A-pm-04 14:50 – 15:10

Powder Injection Molded Graphite for Tribological Applications

Christian A Rottmair¹, Michael Gruhl¹ (¹Univ. of Erlangen, Germany) 8

14A-pm-05 15:10 – 15:30

New Graphite Based Composite Materials for Low Emission Combustion Engines

Javier Narciso¹, Noelia Calderon¹, Alejandro Rodriguez¹, Segundo Sanchez¹, Francisco Reinoso¹, Rachel Rios¹, Lenneart Ljungberg², Enrique Louis¹ (¹Alicante Univ., Spain) (²Skövde Univ., Sweden) 8

14A-pm-06 15:30 – 15:50

Precise Manipulation of Magnetic Carbon Nanotubes by a Rotational Magnetic Field

Toru Maekawa¹, Hisao Morimoto¹, Akitoshi Eto¹, Yutaka Nagaoka¹, Tomofumi Ukai¹, Nicole Grobert² (¹Toyo Univ., Japan) (²Univ. of Oxford, UK) 9

15:50 – 16:00 Coffee Break

Metropolitan Lobby 3F, Asama B, Lobby 2F, Sunroute Lobby 3F

Session B

Metropolitan Room Azusa

ELECTROCHEMISTRY, BATTERIES AND CAPACITORS

Chairs: Dr. Hiroaki Hatori (AIST, Japan)

Prof. Kap Seung Yang (Chonnam National Univ., Korea)

14B-pm-01 13:30 – 14:00 FEATURED LECTURE

Pure Single-walled Carbon Nanotube Electrodes for Supercapacitors

Dr. Hiroaki Hatori¹, Osamu Kimizuka¹, Osamu Tanaike¹, Junya Yamashita¹, Don Futaba¹, Kenji Hata¹, Susumu Saeki², Yoshio Yamada², Kenji Mashida³, Shunzo Suematsu³, Kenji Tamamitsu³ (¹National Institute of Advanced Industrial Science and Technology (AIST), Japan) (²Fukui Univ., Japan) (³Nippon Chemi-Con Corporation) 12

14B-pm-02 14:00 – 14:20

Nitrogen-doped Carbons for Supercapacitors

Denisa Hulicova Jurcakova¹, Masaya Kodama², Teresa Badosz³, Max Lu¹ (¹Univ. of Queensland, Australia) (²National Institute of Advanced Industrial Science and Technology (AIST), Japan) (³The City College of New York, USA) 13

14B-pm-03 14:20 – 14:40

Preparation of Ti/O/C/N Materials by Chemical Vapor Deposition Method and Their Photo-electrochemical Characteristics

Yuko Taniguchi¹, Daizou Imai¹, Masayuki Kawaguchi¹ (¹Osaka Electro-Comm. Univ., Japan) 13

14B-pm-04 14:40 – 15:00

Capacitor Performance of Carbon Fibers Prepared from Commercially Available Meta-aramid Fiber "Conex"

Yutaka Kaburagi¹, Akira Inoue¹ (¹Musashi Institute of Technology, Japan) 14

14B-pm-05 15:00 – 15:20

Enhanced Electrochemical Capacity Materials for Energy Storage Applications

Anthony G. Pandolfo¹, Gregory Wilson¹ (¹CSIRO, Australia) 14

14B-pm-06 15:20 – 15:40

Synthesis and Electrochemical Characterizations of MnO₂-dispersed Carbon Aerogel as Supercapacitor Electrode Material

Ruowen Fu¹, Guifen Lv¹, Dingcai Wu¹ (¹Sun Yat-sen Univ., China) 15

15:40 – 16:00 Coffee Break

Metropolitan Lobby 3F, Asama B, Lobby 2F, Sunroute Lobby 3F

CARBON 2008 Conference Program Oral

Oral Sessions MONDAY, JULY 14, 2008

14PM2 (ORAL SESSION 3)

Session A

Metropolitan Room Asama A

NANOFORMS

*Chairs: Prof. Feiyu Kang (Tsinghua Univ., China)
Prof. Masahiro Toyoda (Oita Univ., Japan)*

14A-pm-07 16:00 – 16:30 KEYNOTE LECTURE

Raman Scattering from Graphene and Narrow Graphene Ribbons

Prof. Peter C. Eklund (Pennsylvania State Univ., USA) 9

14A-pm-08 16:30 – 16:50

Carbon Nanospheres Derived via Sedimentation from Resorcinol-Formaldehyde Solutions

Christian Scherdel¹, Tobias Scherb¹, Gudrun Reichenauer¹,
(¹Bavarian Center for Applied Energy Research, Germany) 10

14A-pm-09 16:50 – 17:10

Comparative Characterization of Porous Carbons Derived from Different Aromatic Compounds

Arkadi Maisels¹, Yves Stommel¹, Frank Stenger¹, Jutta Zimmermann¹, Gudrun Reichenauer², Christian Scherdel²
(¹Evonik Degussa, Germany) (²Bavarian Center for Applied Energy Research, Germany) 10

14A-pm-10 17:10 – 17:30

Catalytic Activity of Carbon Nanofoams Supported Iron

Michell S. Francesconi¹, Maibelin Rosales¹, Juan Matos¹
(¹Venezuelan Institute for Scientific Research, Venezuela) 11

14A-pm-11 17:30 – 17:50

Incorporation of Organic Monomers within a Carbon Matrix via One Step Hydrothermal Carbonization

Rezan Demir-Cakan¹, Maria Titirici¹, Markus Antonietti¹
(¹Max-Planck Institute, Germany) 11

14A-pm-12 17:50 – 18:10

Direct Fabrication of Bimodal Mesoporous Carbon by Nanocasting

Dingcai Wu (Sun Yat-sen Univ., China) 12

18:20 – 20:30

POSTER SESSION 1

Session B

Metropolitan Room Azusa

ELECTROCHEMISTRY, BATTERIES AND CAPACITORS

*Chairs: Prof. S. M. Oh (Seoul National Univ., Korea)
Prof. Fujio Okino (Shinshu Univ., Japan)*

14B-pm-07 16:00 – 16:30 INVITED LECTURE

Electrochemical Activation Behavior of Graphitic Carbons

Prof. S. M. Oh (Seoul National Univ., Korea) 15

14B-pm-08 16:30 – 17:00 FEATURED LECTURE

Understanding of the Electrochemical Process in Supercapacitor by Using Zeolite Templated Carbon as a Model Material

Dr. Hiroto Nishihara¹, Hiroyuki Itoi¹, Taichi Kogure¹, Peng-Xiang Hou¹, Takashi Kyotani¹
(¹Tohoku Univ., Japan) 16

14B-pm-09 17:00 – 17:20

A Route to Evaluate the Contribution of Each Mechanism of Energy Storage to the Overall Capacitance of Supercapacitors

Vanesa Ruiz¹, I. Villar¹, C. Blanco¹, M. Granda¹, R. Menéndez¹, R. Santamaría¹ (¹Institute of Nacional Carbon, Spain) 16

14B-pm-10 17:20 – 17:40

Hierarchical Porous Carbon with Localized Graphitic Units for High Rate Electrochemical Capacitive Energy Storage

Feng Li¹, Da-Wei Wang¹, Min Liu¹, Hui-Ming Cheng¹
(¹Institute of Metal Research, China) 17

14B-pm-11 17:40 – 18:00

Electrochemical Intercalation of Solvated Lithium Ions into Carbon Nanotube Bundles and Their Expansion

Osamu Tanaike¹, Osamu Kimizuka², Katane Yamada¹, Hiroaki Hatori¹ (¹National Institute of Advanced Industrial Science and Technology (AIST), Japan) (²Univ. of Fukui, Japan) 17

14B-pm-12

(Withdrawn)

Move to 16P-I-103.

18:20 – 20:30

POSTER SESSION 1

CARBON 2008 Conference Program Oral

Oral Sessions MONDAY, JULY 14, 2008

14AM2 (ORAL SESSION 1)

Session C

Metropolitan Room Shiga

CARBONIZATION AND GRAPHITIZATION

Chairs: Prof. P. Thrower (Editor-in-Chief, CARBON, UK)

Prof. T. Kyotani (Tohoku Univ., Japan)

14C-am-01 10:20 – 10:50 INVITED LECTURE

Carbon Material Carbonization in Plastic Phase

Prof. Sylvie A. Bonnamy (CRMD/CNRS-Univ., France) 18

14C-am-02 10:50 – 11:10

Carbonization Behavior of Iodine Treated Carbonaceous Mesophase

Eiichi Yasuda¹, Takashi Nishizawa¹, Tomohiro Furukawa¹, Asao Oya¹, Mitunao Kakuta¹, Takashi Akatsu¹ (¹Tokyo Institute of Technology, Japan) 19

14C-am-03 11:10 – 11:30

Temperature-programed Oxidation Study of Carbons from Low Density Polyethylene Pyrolysis

Noelia Alonso-Morales¹, Miguel Gilarranz¹, Semih Eser², Juan Rodríguez¹ (¹Universidad Autónoma de Madrid, Spain) (²Penn. State Univ., USA) 19

14C-am-04 11:30 – 11:50

Microstructures and Porous Structures of Bituminous Coal in Heat-treatment

Ying Bao¹, Yun Chuan¹ (¹Peking Univ., China) 20

14C-am-05 11:50 – 12:10

Highly Crystalline Carbon Films Produced from Benzimidazobenzophenanthroline Ladder-polymer

Junya Yamashita¹, Masatoshi Shioya², Hiroaki Hatori¹ (¹National Institute of Advanced Industrial Science and Technology (AIST), Japan) (²Tokyo Institute of Technology, Japan) 20

14C-am-06 12:10 – 12:30

Carbonization and Structure Properties of Film-typed Products Obtained from Cellulose Polymers

Naoya Miyajima¹, Naoto Ishikawa¹, Hideto Sakane¹, Hiroaki Hatori² (¹Univ. of Yamanashi, Japan) (²AIST, Japan) 21

12:30 – 13:30 LUNCH

Metropolitan Asama B, C and Chikuma

Session D

Sunroute Room Hiten

ADSORPTION, SURFACES AND POROUS MATERIALS

Chairs: Prof. Teresa J. Bandosz (City College of New York, USA)

Prof. Katsumi Kaneko (Chiba Univ., Japan)

14D-am-01 10:20 – 10:40

Interaction between Hydrogen and the Surface of Foreign Atoms Doped Carbon.

Haruo Kumagai¹, Yosimi Kanematsu², Jun-ichi Ozaki² (¹Hokkaido Univ., Japan) (²Gunma Univ., Japan) 21

14D-am-02 10:40 – 11:00

Removal of Ammonia from Air on Molybdenum and Tungsten Oxide Modified Activated Carbons

Teresa J. Bandosz¹, Camille Petit¹ (¹City College of New York, USA) 22

14D-am-03 11:00 – 11:20

TPD Study of Surface Structure of Activated Carbons Oxidized and Loaded with Platinum during Heat Treatment

Hideyuki Takagi¹, Hiroaki Hatori¹ (¹National Institute of Advanced Industrial Science and Technology (AIST), Japan) 22

14D-am-04 11:20 – 11:40

Tailoring Regeneration of GAC for TOC and Benzene Removal

Weifang Chen¹, Adam Redding¹, Tinina Thompson¹, Fred Cannon¹ (¹Pennsylvania State Univ., USA) 23

14D-am-05 11:40 – 12:00

Competitive Adsorption of Phenol and Heavy Metals in Aqueous Solution onto Bamboo Type Nitrogen Doped Carbon Nanotubes

Paola E. Diaz-Flores¹, J. Rangel-Mendez¹, M. Terrones¹ (¹IPICyT, Mexico) 23

14D-am-06 12:00 – 12:20

Influence of the Recovery Procedure of Kraft Lignin over Its Nickel Adsorption Capacity

Luisa A Delgado¹, Monica Krauter¹, Carlos Urbaneja¹, Ana Nunez¹, Narciso Perez¹ (¹Simon Bolivar Univ., Venezuela) 24

12:30 – 13:30 LUNCH

Metropolitan Asama B, C and Chikuma

CARBON 2008 Conference Program Oral

Oral Sessions MONDAY, JULY 14, 2008

14PM1 (ORAL SESSION 2)

Session C

Metropolitan Room Shiga

CARBONIZATION AND GRAPHITIZATION

Chairs: Prof. Hidetaka Konno (Hokkaido Univ., Japan)

Dr. Junya Yamashita (AIST, Japan)

14C-pm-01 13:30 – 13:50

Effect of High Pressure and High Temperature on Detonation Nanodiamond and Microdiamond

Sergey V. Kidalov¹, Fedor Shakhov¹, Alexander Vul¹ (¹Ioffe Institute, Russia) 24

14C-pm-02 13:50 – 14:10

Preparation and Characterization of Mesophase-pitch-based Foam/Natural Graphite Composites

Cheng-Yang Wang¹, Mei-xian Wang¹, Tong-Qi Li², Zi-Jun Hu² (¹Tianjin Univ., China) (²Aerospace Research Institute of Materials & Processing Technology, China) 25

14C-pm-03 14:10 – 14:30

Synthesis of Functionalized Mesoporous Carbon via a One-pot Hydrothermal Carbonization Method

Niki Baccile¹, Maria Magdalena Titirici¹, Markus Antonietti¹ (¹Max-Planck Institute, Germany) 25

14C-pm-04 14:30 – 14:50

Synthesis and Applications of Carbon Xerogel Microspheres and Fractal like Structures

Chandra Shekhar Sharma¹, Manish Kulkarni¹, Ashutosh Sharma¹ (¹Indian Institute of Technology, India) 26

14C-pm-05 14:50 – 15:10

Preparation of High Surface Area Granular Activated Carbon Using Chemical Activation Techniques

Mahnaz N. Asl¹, Majid Abedinzadegan Abdi², Alireza Mirhabibi³, Mohammad Mahdyarfar¹, Roya Aghababazadeh (¹RPI, Iran) (²Memorial Univ. of Newfoundland, Canada) (³Iran Univ. of Science and Technology, Iran) (⁴Institute for Colorants, Paint and Coatings, Iran) 26

14C-pm-06 15:10 – 15:30

High Temperature Carbons from LPDE Chars

Juan J. Rodriguez¹, Noelia Alonso-Morales¹, Miguel Gilarranz¹, Semih Eser² (¹Universidad Autonoma de Madrid, Spain) (²Pennsylvania State Univ., USA) 27

15:30 – 16:00 Coffee Break

Metropolitan Lobby 3F, Asama B, Lobby 2F, Sunroute Lobby 3F

Session D

Sunroute Room Hiten

ADSORPTION, SURFACES AND POROUS MATERIALS

Chairs: Prof. Philippe Westreich (Dalhousie Univ., Canada)

Prof. Haruo Kumagai (Hokkaido Univ., Japan)

14D-pm-01 13:30 – 13:50

Transition of ZnCl₂ from Hydrophobic Monolayer to Hydrophilic Aggregate when Impregnated on Activated Carbon and Its Capacity for Ammonia Removal

Philippe Westreich¹, Hubert Fortier¹, Stanley Selig¹, Caleb Zelenietz¹, Jeff Dahn¹ (¹Dalhousie Univ., Canada) 30

14D-pm-02 13:50 – 14:10

Reaction Mechanism of Chemical Activation of Phenol Formaldehyde Resin with Potassium Hydroxide for Producing High-surface-area Activated Carbon

Hiroyuki Nakagawa¹, Yoh Abe¹, Itaru Johichi¹, Kouichi Miura¹ (¹Kyoto Univ., Japan) 30

14D-pm-03

(Withdrawn)

14D-pm-04 14:10 – 14:30

Synthesis of Aluminium Phosphate and Their Templated Ordered Porous Carbons

Chunxia Zhao¹, Yunxia Yang¹, Wen Chen², Huanting Wang¹, Dongyuan Zhao³, Paul Webley¹ (¹Monash Univ., Australia) (²Wuhan Univ. of Technology, China) (³Fudan Univ., China) 31

14D-pm-05 14:30 – 14:50

The Controllable Synthesis of Mesoporous Carbon Materials

Yu Wang¹, Bin Cai¹, Li Lin¹, Yuexiang Zhu¹, Youchang Xie¹, Erhard Kemnitz² (¹Peking Univ., China) (²Humboldt Univ., Germany) 32

14D-pm-06 15:50 – 15:10

Synthesis of Hollow Carbon Spheres

Xuejun Zhang¹, Zhiyong Zhang¹ (¹Beijing Univ. of Chem. Technol., China) 32

15:30 – 16:00 Coffee Break

Metropolitan Lobby 3F, Asama B, Lobby 2F, Sunroute Lobby 3F

CARBON 2008 Conference Program Oral

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14PM2 (ORAL SESSION 3)

Session C

Metropolitan Room Shiga

CARBONIZATION AND GRAPHITIZATION

Chairs: Prof. Eiichi Yasuda (Tokyo Institute of Technology, Japan)

Prof. Sylvie A. Bonnamy (CNRS, France)

14C-pm-07 16:00 – 16:30 INVITED LECTURE

Pathways of Tar Formation and Tar Degradation

Prof. Wolfgang A. Klose¹, Arndt-Peter Schinke¹ (¹Univ. of Kasse, Germany) 27

14C-pm-08 16:30 – 16:50

Kinetic Study of Controlled Oxidation of PVC and Pitch Chars

Francisco G. Emmerich¹, Gisele Altoe¹, Jair Freitas¹, Alfredo Cunha¹ (¹Universidade Federal do Espírito Santo, Brazil) 28

14C-pm-09 16:50 – 17:10

Temperature-programmed Oxidation Studies of High Temperature Carbons Prepared from Low Density Polyethylene

Miguel A. Gilarranz¹, Noelia Alonso-Morales¹, Semih Eser², Juan Rodríguez¹ (¹Universidad Autónoma de Madrid, Spain) (²Pennsylvania State Univ., USA) 28

14C-pm-10 17:10 – 17:30

Agave Bagasse as a Precursor to Produce Highly Microporous Activated Carbons

César Nieto Delgado¹, Jose Rangel-Mendez¹, Mauricio Terrones¹ (¹IPICT, Mexico) 29

14C-pm-11 17:30 – 17:50

Creation of Carbon Nano/Micro Structures via the Interaction between UV Photons and Fluid Molecules under Near-critical Conditions

Toru Maekawa¹, Takahiro Fukuda¹, Takashi Hasumura¹, Nami Watabe¹, Nyrki Rantonen¹, Raymond Whitby² (¹Toyo Univ., Japan) (²Univ. of Brighton, UK) 29

18:20 – 20:30

POSTER SESSION 1

Session D

Sunroute Room Hiten

ADSORPTION, SURFACES AND POROUS MATERIALS

Chairs: Prof. Paul A. Webley (Monash Univ., Australia)

Prof. Taku Iiyama (Shinshu Univ., Japan)

14D-pm-07 16:00 – 16:30 KEYNOTE LECTURE

Nanopore Structure and Clean Gas Storage of C₆₀-Pillared Single Wall Carbon Nanotube Bundles

Prof. Katsumi Kaneko (Chiba Univ., Japan) 33

14D-pm-08 16:30 – 16:50

Attribution of Microporous Structure in Activated Carbons to Methane Storage

Yoshiteru Nakagawa¹, Joaquin Silvestre-Albero¹, Miguel Molina-Sabio¹, Francisco Rodríguez-Reinoso¹ (¹Univ. of Alicante, Spain) 33

14D-pm-09 16:50 – 17:10

Nano-porous Carbon Produced by CDC (Carbide-derived Carbon) Method

Nadejda Popovska¹, Martina Kormann¹ (¹Univ. of Erlangen-Nuremberg, Germany) 34

14D-pm-10 17:10 – 17:30

Accessibility of the Microporosity of Filtrasorb 400 Activated Carbon to the Herbicide Imazamox and P-nitrophenol Molecules

Catherine Morlay¹, Michaela Pilshofer¹, Etienne Quivet¹, Insaf Zidi-Dhouieb¹, Rene Faure¹, Jean-Pierre Joly¹ (¹Univ. of Lyon, France) 35

14D-pm-11 17:30 – 17:50

Modelling Breakthrough Curves with the Dubinin-Astakhov isotherm and the Linear Driving Force Approximation

Jean-Pierre Joly¹, Alain Perrard¹, Agnès Joly¹ (¹Univ. of Lyon, France) 36

18:20 – 20:30

POSTER SESSION 1

CARBON 2008 Conference Program Oral

Oral Sessions

TUESDAY, JULY 15, 2008

15AM1 Metropolitan

8:00 - 8:30 Asama B, C INFORMATION

8:30 - 9:20 Asama B, C PLENARY LECTURE

Professor François Béguin (CNRS, France)

“Applications of Carbon Materials in Electrochemical Energy Storage Systems”

Chair: Prof. Noboru Akuzawa (Tokyo National College of Technology)

9:20 – 9:50 BREAK Metropolitan Lobby 3F, Asama B, Lobby 2F, Sunroute Lobby 3F

15AM2 (ORAL SESSION 4)

Session A

Metropolitan Room Asama A

NANOFORMS

Chairs: Dr. Hui-Ming Cheng (Institute of Metal Research, China)

Dr. Hiroshi Shioyama (AIST, Japan)

15A-am-01 9:50 – 10:20 KEYNOTE LECTURE

Geometry of Nanographene and Its Unconventional Magnetic Properties

Prof. Toshiaki. Enoki (Tokyo Institute of Technology, Japan) 37

15A-am-02 10:20 – 10:40

Fine Nanostructure Analysis of Single-Wall Carbon Nanohorns by Surface Enhanced Raman Scattering

Toshihiko Fujimori¹, Koki Urita¹, Yuusuke Aoki¹, Hirofumi Kanoh¹, Tomonori Ohba¹, Masako Yudasaka², Sumio Iijima², Katsumi Kaneko¹ (¹Chiba Univ., Japan) (²NEC Corporation, Japan) 37

15A-am-03 10:40 – 11:00

Structure and Productivity of Graphenes from Different Raw Graphite by a Chemical Exfoliation Method

Hui-Ming Cheng¹, Zhong-Shuai¹ Wu¹, Wen-Cai Ren¹, Li-Bo Gao¹ (¹Institute of Metal Research, CAS, China) 38

15A-am-04 11:00 – 11:20

Oxidative Conversion of TiC-Coated MWCNTs, Produced in a Molten Salt Reaction Medium, into TiO₂-Coated MWCNTs

Aidan V K Westwood¹, Graham Cooke¹, Nicole Hondow¹, Rik Brydson¹, Richard Douthwaite², Xuanke Li³ (¹Univ. of Leeds, UK) (²Univ. of York, UK) (³High Temperature Ceramic & Refractory Key Laboratory of Hubei Province, Wuhan Univ. of Science & Technology, China) 38

15A-am-05 11:20 – 11:40

Growth Process and Structures of Carbon Nanowalls by Plasma-Enhanced Chemical Vapor Deposition

Hirofumi Yoshimura¹, Hironori Kitada¹, Ikuo Kinoshita¹, Ken-ichi Kobayashi², Hiroshi Nakai³, Kenichi Kojima¹, Masaru Tachibana¹ (¹Yokohama City Univ., Japan) 39

Session B

Metropolitan Room Azusa

ELECTROCHEMISTRY, BATTERIES AND CAPACITORS

Chairs: Prof. François Béguin (CNRS, France)

Dr. Yasushi Soneda (AIST, Japan)

15B-am-01 9:50 – 10:20 FEATURED LECTURE

Effect of Nitrogen on Pseudocapacitor Characteristics

Prof. Elzbieta Frackowiak¹, Grzegorz Lota¹ (¹Poznan Univ., Poland) 40

15B-am-02 10:20 – 10:40

Electrochemical Properties of Natural Graphite Fluorinated by ClF₃ and NF₃ in Propylene Carbonate – Containing Solvent

Tsuyoshi Nakajima¹, Xinqun Cheng¹, Jianling Li¹, Takashi Achiha¹, Yoshimi Ohzawa¹, Zoran Mazej², Boris Zemva² (¹Aichi Institute of Technology, Japan) (²Jozef Stefan Institute, Slovenia) 40

15B-am-03 10:40 – 11:00

Influence of the Oxygen Functional Groups at the Graphite Surface on the Course of the First Intercalation of Lithium

Cathie Vix-Guterl¹, Roger Gadiou¹, Philippe Bernardo¹, Petr Novak², S.H. Ng², Michael. E Spahr³, Dietrich Goers³ (¹ICSI-CNRS, France) (²PSI Villigen, Switzerland) (³TIMACAL, Switzerland) 41

15B-am-04 11:00 – 11:20

Pyrocarbon Coating on Carbonized Paper for Anode of Lithium-Ion Secondary Battery and Its Electrochemical Properties in Propylene Carbonate Base Electrolyte

Yoshimi Ohzawa¹, Tomohiro Suzuki¹, Tsuyoshi Nakajima¹ (¹Aichi Institute of Technology, Japan) 42

15B-am-05 11:20 – 11:40

Decreasing Irreversible Capacity of Silicon-CNF Composites in Li-Secondary Battery

Sang-min Jang¹, Masaharu Tsuji¹, Isao Mochida¹, Seong-Ho Yoon¹ (¹Kyushu Univ., Japan) (²NISSAN ARC, LTD, Japan) (³IHI Corporation, Japan) 42

CARBON 2008 Conference Program Oral

15A-am-06 11:40 – 12:00

Formation of Fluorinated Carbon Nanoparticles Using Atmospheric-pressure Plasma

Tomohiro Kobayashi¹, Kastunori Suzuki ² (¹Riken, Japan)
(²Saitama Univ., Japan) 39

12:00 – 13:10 LUNCH

Metropolitan Asama B, C and Chikuma

15B-am-06 11:40 – 12:00

Coating of Pre-Formed Si Nanoparticles with Hydrothermal Carbon as Novel Anode Material for Lithium-Ion Batteries

Rezan Demir-Cakan¹, Yong-Sheng Hu², Maria Magdalena Titirici¹, Jens O. Muller³, Robert Schlogl³, Markus Antonietti¹, Joachim Maier² (¹Max-Planck Institute, Germany) (²Max-Planck Institute for Solid State Research, Germany) (³Fritz Haber Institute of the Max-Planck Society, Germany) 43

12:00 – 13:10 LUNCH

Metropolitan Asama B, C and Chikuma

CARBON 2008 Conference Program Oral

Oral Sessions **TUESDAY, JULY 15, 2008**

15PM1 (ORAL SESSION 5)

Session A

Metropolitan Room Asama A

NANOFORMS

Chairs: Prof. Peter C. Eklund (Penn. State Univ. USA)

Dr. Tomohiro Kobayashi (Riken, Japan)

15A-pm-01 13:10 – 13:40 INVITED LECTURE

Synthesis of Ferromagnetic Nanowires Filling Thin-Walled Carbon Nanotubes and Their Properties

Prof. Feiyu Kang¹, Ruitao Lv¹, Xuchun Gui¹, Wenxiang Wang¹, Jialin Gu¹, Kunlin Wang¹, Dehai Wu¹ (¹Tsinghua Univ., China) 43

15A-pm-02 13:40 – 14:00

Effect of Growth Conditions on Carbon Nanofibers Grown on Fused Silica Substrates Using Nickel Thin-Film Catalyst

Digvijay B. Thakur¹, R. M. Tiggelaar¹, K. Seshan¹, J. G. E. Gardeniers¹, L. Lefferts¹ (¹Univ. of Twente, Netherlands) 44

15A-pm-03 14:00 – 14:20

Fluorination of Carbon Nanocones and Nanodiscs

Marc Dubois¹, Wei Zhang¹, Katia Guérin¹, André Hamwi¹, Jérôme Giraudet², Francis Masin² (¹Clermont Univ., France) (²Univ. Pierre, France) 44

15A-pm-04 14:20 – 14:40

On the Influence of Pore Size and Surface Properties on Proteins Adsorption in the Cavities of MWCNTs Prepared by the Template Method.

Cathie Vix-Guterl¹, Vijay Munusamy¹, Karine Anselme¹, Roger Gadiou¹, Takashi Kyotani², Hironori Orikasa¹ (¹ICSI-CNRS, France) (²IMRAM – Tohoku, Japan) 45

15A-pm-05 14:40 – 15:00

Templated Nanoporous Carbon as an Electrode Material for Electrochemical Double Layered Capacitor (EDLC)

Qiang Xu¹, Bo Liu¹, Hiroshi Shioyama¹ (¹National Institute of Advanced Industrial Science and Technology (AIST), Japan) 45

15A-pm-06 15:00 – 15:20

Electroconductive Plastics Using Electroconductivity of Nanometer Sized Exfoliated Carbon Fibers

Masahiro Toyoda¹, Satoshi Yoshinaga¹, Tomoki Tsumura¹ (¹Oita Univ., Japan) 46

15:20 – 15:40 Coffee Break

Metropolitan Lobby 3F, Asama B, Lobby 2F, Sunroute Lobby 3F

Session B

Metropolitan Room Azusa

ELECTROCHEMISTRY, BATTERIES AND CAPACITORS

Chairs: Dr. Denisa Hulicova Jurcakova (Univ. of Queensland, Australia)

Prof. Tsuyoshi Nakajima (Aichi Institute of Technology, Japan)

15B-pm-01 13:10 – 13:40 INVITED LECTURE

Lithium-Ion Kinetics at Graphite Electrode

Prof. Takeshi Abe (Kyoto Univ., Japan) 50

15B-pm-02 13:40 – 14:00

Cyclic Performance of Silicon-Containing Materials for Lithium Ion Batteries

Wenming Qiao¹, Hong Peng Liu¹, Rui Zhang¹, Wenming Qiao¹, Li Cheng Ling¹ (¹East China Univ., China) 50

15B-pm-03 14:00 – 14:20

Influence of the Electrolyte Composition and Graphite Particle Size on the Electrochemical Intercalation of Hexafluorophosphate Anions

Wolfgang Maerkle¹, Nicolas Tran¹, Petr Novák¹, Dietrich Goers², Michael E. Spahr², Eusebio Grivei², (¹Paul Scherrer Institute, Switzerland) (²TIMCAL SA, Switzerland) 51

15B-pm-04 14:20 – 14:40

Electrochemical Characterization of Fluorinated Carbon Thin Films Prepared by Electron Cyclotron Resonance (ECR) Sputtering

Akio Ueda¹, Tomoyuki Kamata², Dai Kato³, Naoyuki Sekioka⁴, Ryoji Kurita⁵, Shigeru Hirono⁶, Shigeru Umemura², Fujio Okino⁷, Hidekazu Tohara⁷, Osamu Niwa⁴ (¹Tokyo Institute of Technology, Japan) (²Chiba Institute of Technology, Japan) (³JST-CREST, Japan) (⁴Univ. of Tsukuba, Japan) (⁵National Institute of Advanced Industrial Science and Technology (AIST), Japan) (⁶MES AFTY Corporation, Japan) (⁷Shinshu Univ., Japan) 52

15B-pm-05 14:40 – 15:00

Metal Tracing Performance of Nitrogenated Diamond-like Carbon Films

Nay Win Khun¹, Nay Win Khun¹ (¹Nanyang Technical Univ., Singapore) 52

15:20 – 15:40 Coffee Break

Metropolitan Lobby 3F, Asama B, Lobby 2F, Sunroute Lobby 3F

CARBON 2008 Conference Program Oral

Oral Sessions **TUESDAY, JULY 15, 2008**

15PM2 (ORAL SESSION 6)

Session A

Metropolitan Room Asama A

NANOTUBES

Chairs: Prof. M. S. Strano (MIT, USA)

Dr. Satoshi Ishii (NIMS, Japan)

15A-pm-07 15:40 – 16:10 KEYNOTE LECTURE

Nanocarbons: Highly Active Catalysts for Chemical Reactions

Dr. Dangsheng Su (Fritz Haber Institute, Germany) 46

15A-pm-08 16:10 – 16:40 INVITED LECTURE

Selective Optical Property Modification of Double Walled Carbon Nanotubes by Fluorination

Prof. Takuya Hayashi¹, Daisuke Shimamoto¹, Yoong Ahm Kim¹, Hiroyuki Muramatsu¹, Fujio Okino¹, Hidekazu Touhara¹, Takashi Shimada², Yuhei Miyauchi², Shigeo Maruyama², Mauricio Terrones³, Mildred Dresselhaus⁴, Morinobu Endo¹ (¹Shinshu Univ., Japan) (²Univ. of Tokyo, Japan) (³IPICyT, Mexico) (⁴MIT, USA) 47

15A-pm-09 16:40 – 17:00

Thermal and Electrical Transport Properties of 1-mm-Thick Vertically Aligned Carbon Nanotubes

Atsuto Okamoto¹, Itaru Gunjishima¹, Takashi Inoue¹, Megumi Akoshima², Hidenori Miyagawa³, Tetsuya Baba², Gendo Oomi³ (¹Toyota Central R&D Labs, Inc., Japan) (²AIST, Japan) (³Kyushu Univ., Japan) 47

15A-pm-10 17:00 – 17:20

Resistivity Reduction of Boron-doped Multi-Walled Carbon Nanotube

Satoshi Ishii¹, Tohru Watanabe¹, Shunsuke Tsuda¹, Takahide Yamaguchi¹, Yoshihiko Takano¹ (¹NIMS, Japan) 48

15A-pm-11 17:20 – 17:40

First-Principles Characterisation of the Stability of Carbon Nanotubes: Structural Effects on Stability and Radial Breathing Mode

Gemma L. Haffenden¹, Malcolm I. Heggie¹, Irene Suarez Martinez², Gianluca Savini¹ (¹Univ. of Sussex, UK) (²IMN, Nantes, UK) 48

15A-pm-12 17:40 – 18:00

Electronic Superstructures in Double-Walled Carbon Nanotubes

Yann Tison¹, Cristina E. Giusca², Jeremy Sloan², Yasuhiko Hayashi³, S. Ravi P. Silva² (¹Technical Univ. of Denmark, Denmark) (²Univ. of Surrey, UK) (³Nagoya Institute of Technology, Japan) 49

15A-pm-13 18:00 – 18:20

Preparation of Macro-porous Solid Foam from CNTs Using Ice-crystal Templates

Napawon Thongprachan¹, Kyuya Nakagawa², Noriaki Sano², Mitsutaka Kitamura², Tawatchai Charinpanitkul¹, Wiwut Tanthapanichakoon³ (¹Chulalongkorn Univ., Thailand) (²Univ. of Hyogo, Japan) (³National Nanotechnology Center, Thailand) 49

18:20-20:30

POSTER SESSION 2

Session B

Metropolitan Room Azusa

ELECTROCHEMISTRY, BATTERIES AND CAPACITORS

Chairs: Prof. Elzbieta Frackowiak (Poznan Univ., Poland)

Prof. Takeshi Abe (Kyoto Univ., Japan)

15B-pm-06 15:40 – 16:10 KEYNOTE LECTURE

PAN/Pitch Blend Fibers from Electrospinning for EDLC Applications

Nhu-Ngoc Bui¹, Chan Kim², Bo-Hye Kim¹, Jeong Hyeon Yun¹, John P. Ferraris³, Prof. Kap-Seung Yang¹ (¹Chonnam National Univ., Korea) (²AMOMEDI Co. Ltd., Korea) (³Univ. of Texas at Dallas, USA) 53

15B-pm-07 16:10 – 16:40 FEATURED LECTURE

Effects of Surface Treatments on the Electrochemical Oxygen Reduction Activity of Nanoshell Carbon Electrode Catalysts

Prof. Jun-ichi Ozaki¹, Jun Yamazaki¹, Masaaki Takei¹, Susumu Sasaoka¹, Keita Takakusaki¹, (¹Gunma Univ., Japan) 53

15B-pm-08 16:40 – 17:00

Electrochemical Oxidation Reaction of Highly Oriented Pyrolytic Graphite in Sulfuric Acid Solution

Taro Kinumoto¹, Masahiro Toyoda¹, Hyun-Suk Choo², Masafumi Nose², Yasutoshi Iriyama², Takeshi Abe², Zempachi Ogumi² (¹Oita Univ., Japan) (²Kyoto Univ., Japan) 54

15B-pm-09 17:00 – 17:20

Nanostructured Si/C Composites Based on Pitch Derived Carbons for Li-ion Batteries

Krzysztof Kierzek¹, Yasin Eker², Jacek Machnikowski¹, Encarnation Raymundo-Pinero², François Beguin² (¹Wroclaw Univ. of Technology, Poland) (²CRMD, CNRS-Univ., France) 54

15B-pm-10 17:20 – 17:40

Preparation of PEFC Electrodes from Vertically Aligned Carbon Nanopillars with Tunable Sizes

Hironori Orikasa¹, Michiyasu Okada¹, Takashi Kyotani¹, Tatsuya Hatanaka², Yoshiaki Fukushima² (¹Tohoku Univ., Japan) (²Toyota Central R&D Labs., Inc., Japan) 55

15B-pm-11 17:40 – 18:00

Preparation and Characterization of Graphite Nanosheets as Catalyst Support for Fuel Cells

Lin Gan¹, Hongda Du¹, Baohua Li², Feiyu Kang¹ (¹Tsinghua Univ., China) (²Institute of Advance, China) 55

15B-pm-12 18:00 – 18:20

Hierarchical Porous Carbon Synthesized by Liquid Inorganic Template Approach

Feng Li¹, Da-Wei Wang¹, Min Liu¹, Hui-Ming Cheng¹ (¹Institute of Metal Research, CAS, China) 56

18:20-20:30

POSTER SESSION 2

CARBON 2008 Conference Program Oral

Oral Sessions TUESDAY, JULY 15, 2008

15AM2 (ORAL SESSION 4)

Session C

Metropolitan Room Shiga

DIAMONDS AND GICs

Chairs: Prof. Hisashi Nakamura (RIST, Japan)

Dr. Alexander Ya Vul' (Ioffe Physico-Technical Institute, Russia)

15C-am-01 9:50 – 10:20 INVITED LECTURE

Detonation Nanodiamonds as a New Nanocarbon Material for Nanotechnology

Dr. Alexander Ya Vul' (Ioffe Physico-Technical Institute, Russia) 56

15C-am-02 10:20 – 10:40

Simulation for Evaluating Superconductivity of Boron-doped Diamond

Satoshi Nakamura¹, Syogo Tejima¹, Masashi Tachiki^{1,2}, David Tomanek³, Hisashi Nakamura¹ (¹RIST, Japan) (²Univ. of Tokyo, Japan) (³Michigan State Univ., USA) 57

15C-am-03 10:40 – 11:00

Direct Fabrication of Adherent and Oriented Diamond Nanostructures on Steel Substrate

Yuanshi Li (Univ. of Saskatchewan, Canada) 57

15C-am-04 11:00 – 11:20

Surface Characterization of Diamond to Be Used in Electronic Devices

Noelia Rojo-Calderon¹, Jose M Molina¹, Richard Prieto¹, Javier Narciso¹, Enrique Louis¹ (¹Univ. of Alicante, Spain) 58

15C-am-05 11:20 – 11:40

Photoelectron Spectroscopic Analysis of Chemical Structure of Diamondlike Carbon with Different Electrical Resistivities

Susumu Takabayashi¹, Keishi Okamoto², Kenya Shimada¹, Kunihiko Motomitsu¹, Hiroaki Motoyama¹, Tatsuyuki Nakatani², Hiroyuki Sakaue¹, Hitoshi Suzuki¹, Takayuki Takahagi¹ (¹Hiroshima Univ., Japan) (²Toyo Advanced Technologies Co., Ltd., Japan) 58

15C-am-06 11:40 – 12:00

Sp-linear Chains and Photoexcited Trans- polyacetylene in Diamond-like Carbon

Maksym Rybachuk¹, John M Bell¹, Anming Hu² (¹Queensland Univ. of Technology, Australia) (²Univ. of Waterloo, Canada) 59

12:00 – 13:10 LUNCH

Metropolitan Asama B, C and Chikuma

Session D

Sunroute Room Hiten

ADSORPTION, SURFACES AND POROUS MATERIALS

Chairs: Prof. Duong D. Do (Univ. of Queensland, Australia)

Dr. Yoshiyuki Hattori (Shinshu Univ., Japan)

15D-am-01 9:50 – 10:10

Re-Evaluation of the Pore Size Distribution in Microporous Carbons by Quenched Solid Density Functional Theory

Alexander V. Neimark¹, Matthias Thommes² (¹Rutgers Univ., USA) (²Quantachrome Instruments, USA) 123

15D-am-02 10:10 – 10:30

Hydrogen Dimer Formation on the Graphite (0001) Surface Due to Preferential Sticking.

Liv Hornekaer¹, Eva Rauls², Zeljko Sljivancanin¹, Wei Xu¹, Roberto Ortero³, Bjoerk Hammer¹, Flemming Besenbacher¹ (¹Univ. of Aarhus, Denmark) (²Univ. of Paderborn, Germany) (³Univ. of Madrid, Spain) 60

15D-am-03 10:30 – 10:50

Hydrogen Storage on Ordered Microporous Carbon Molecular Sieves Containing Dispersed Platinum Nano-particles

Yunxia Yang¹, Chunxia Zhao¹, Dongyuan Zhao¹, Paul A. Webley¹ (¹Monash Univ., Australia) 60

15D-am-04 10:50 – 11:10

Preparation and Hydrogen Storage of High Surface Rayon Based Activated Carbon Fibers

Dong-Lin Zhao¹, Zeng-Min Shen¹ (¹Beijing Univ. of Chemical Technology, China) 61

15D-am-05 11:10 – 11:30

Enhanced Hydrogen Storage Capacity at Room Temperature of CNT/MOF-5 Hybrid Composites

Seung Jae Yang¹, Chong Rae Park¹ (¹Seoul National Univ., Korea) 61

15D-am-06 11:30 – 11:50

The Adsorption of Copper Acetate onto Pretreated Activated Carbons over a Wide Concentration Range

Amjad Farooq¹, Philippe Westreich², Naseem Irfan¹, Jeff Dahn² (¹Pakistan Institute of Engineering and Applied Sciences, Pakistan) (²Department of Physics and Atmospheric Science, Dalhousie Univ., Halifax, NS, Canada) 62

12:00 – 13:10 LUNCH

Metropolitan Asama B, C and Chikuma

CARBON 2008 Conference Program Oral

Oral Sessions TUESDAY, JULY 15, 2008

15PM1 (ORAL SESSION 5)

Session C

Metropolitan Room Shiga

GICs AND CHEMICAL PROPERTIES

Chairs: Prof. M. M. Lerner (Oregon State Univ., USA)

Prof. M. Kawaguchi (Osaka Electro -Communication Univ., Japan)

15C-pm-01 13:10 – 13:40 INVITED LECTURE

Lithium Metal: an Efficient Vector of Intercalation into Graphite

Prof. Claire Hérold¹, Nicolas Emery², Jean-François Mareche², Philippe Lagrange² (¹Univ. of Henri Poincaré, France) (²LCSM, France) 62

15C-pm-02 13:40 – 14:00

Spins of Conduction Electrons as a Probe of Physical and Chemical Transformations in Graphite and Its Compounds

Albert M. Ziatdinov (Russian Academy of Sciences, Russia) 63

15C-pm-03 14:00 – 14:20

Characterization and Properties of Ternary System RbC₂₄ (C₄H₆)_x

Noboru Akuzawa¹, Morio Chiwata¹, Rika Matsumoto², Yasushi Soneda³ (¹Tokyo National College of Technology, Japan) (²Tokyo Polytechnic Univ., Japan) (³National Institute of Advanced Industrial Science and Technology (AIST), Japan) 63

15C-pm-04 14:20 – 14:40

Air-stable Alkali Metal-Graphite Intercalation Compounds

Rika Matsumoto¹, Kazuto Tatebayashi¹, Kazunobu Tsurumi¹, Noboru Akuzawa² (¹Tokyo Polytechnic Univ., Japan) (²Tokyo National College of Technology, Japan) 64

15C-pm-05 14:40 – 15:00

Plasma-chemical Functionalization of Expanded Graphite

Asmus Meyer-Plath¹ (¹Federal Institute for Materials Research and Testing, Germany) 64

15C-pm-06 15:00 – 15:20

Modification of Carbon Microspheres in Different Acids

Xuguang Liu¹, Hongyan Liu¹, Yongzhen Yang¹, Mingcong Guo¹, Bingshe Xu¹ (¹Taiyuan Univ. of Technology, China) 65

15:20 – 15:40 Coffee Break

**Metropolitan Lobby 3F, Asama B, Lobby 2F,
Sunroute Lobby 3F**

Session D

Sunroute Room Hiten

ADSORPTION, SURFACES AND POROUS MATERIALS

Chairs: Prof. Hirofumi Kanoh (Chiba Univ., Japan)

Prof. Krisztina Laszlo (Budapest Univ. of Technology and Economics., Hungary)

15D-pm-01 13:10 – 13:40 INVITED LECTURE

Surface Chemistry of Graphene: Implications for Electrochemical Properties and Behavior of Carbons

Prof. Ljubisa Radovic (Penn. State Univ., USA) 68

15D-pm-02 13:40 – 14:00

Adsorbed Water Vapour in High Surface Area Carbons

Krisztina Laszlo¹, Erik Geissler² (¹Budapest Univ. Technol. Econ., Hungary) (²Univ. J. Fourier de Grenoble, France) 69

15D-pm-03 14:00 – 14:20

Water Isotherms of Structurally Identical Carbons with Different Amounts of Surface Oxygen Groups.

Peter Lodewyckx¹, Encarnación Raymundo-Pinero², Hilda Wullens³, Miroslava Vaclavikova¹, François Béguin² (¹Royal Mil. Acad., Belgium) (²CNRS Orléans, France) (³Belgian Defense – DLD, Belgium) 69

15D-pm-04 14:20 – 14:40

Nanoporous Carbon Films for Capacitance-Storage

Yousheng Tao¹, Morinobu Endo¹, Hirofumi Kanoh², Katsumi Kaneko² (¹Shinshu Univ., Japan) (²Chiba Univ., Japan) 70

15D-pm-05 14:40 – 15:00

Annealing Driven Reorganization of Graphene Layers in Ordered Microporous Carbons

Quan-Hong Yang¹, Zhen Su¹, Feng-Min Jin¹, Hirotomo Nishihara², Takashi Kyotani² (¹Tianjin Univ., China) (²Tohoku Univ., Japan) 70

15:20 – 15:40 Coffee Break

**Metropolitan Lobby 3F, Asama B, Lobby 2F,
Sunroute Lobby 3F**

CARBON 2008 Conference Program Oral

Oral Sessions **TUESDAY, JULY 15, 2008**

15PM2 (ORAL SESSION 6)

Session C

Metropolitan Room Shiga

GICs AND CHEMICAL PROPERTIES

Chairs: Prof. C. Herold (Univ. Henri Poincaré, France)

Prof. Yoshiaki Matsuo (Univ. of Hyogo, Japan)

15C-pm-07 15:40 – 16:10 INVITED LECTURE

Graphite Intercalation with Perfluoroalkylanions

Prof. M. M. Lerner (¹Oregon State Univ., USA) 65

15C-pm-08 16:10 – 16:30

The High Temperature Reaction of Ammonia with Carbon Materials and SiC+C Compounds

Georges Chollon¹, Maeva Lalanne¹, Nicolas Capelle¹, Maud Placide¹, Herve Plaisantin¹, Francis Langlais¹, Georges Chollon¹ (¹Laboratoire des Composites Thermostructuraux (LCTS), France) 66

15C-pm-09 16:30 – 16:50

Semi-Hydrogenation of Phenylacetylene Catalyzed by Palladium Nanoparticles Supported on Carbon Materials

Sonia Domínguez-Domínguez¹, Angel Berenguer-Murcia¹, Bhabendra K. Pradhan², Angel Linares-Solano¹, Diego Cazorla-Amorós¹ (¹Univ. of Alicante, Spain) (²Columbian Chemicals Company, USA) 66

15C-pm-10 16:50 – 17:10

The Role of Oxidation in Obtaining Nitrogen Enriched Active Carbons

Robert Pietrzak¹, Piotr Nowicki¹, Helena Wachowska¹ (¹Adam Mickiewicz Univ. in Poznan, Poland) 67

15C-pm-11 17:10 – 17:30

Investigation of Tribochemical Reactions between Graphite and the Gas Atmosphere during Milling

Jean-Christophe Rietsch¹, Cathie Vix-Guterl¹, Joseph Dentzer¹, Roger Gadiou¹ (ICSI-CNRS, France) 67

15C-pm-12 17:30 – 17:50

Magnetic and Conductive Carbon-based Nanocomposites and Nanolayers Prepared from Graphite Oxide

Tamas Szabo¹, Imre Dékány¹ (¹Univ. of Szeged, Hungary) 68

18:20 – 20:30

POSTER SESSION 2

Session D

Sunroute Room Hiten

ADSORPTION, SURFACES AND POROUS MATERIALS ; ENVIRONMENT AND ENERGY

Chairs: Prof. Sarra Gaspard (Univ. of Antilles et de la Guyane, France)

Dr. Zheng-Ming Wang (AIST, Japan)

15D-pm-06 15:40 – 16:00

A New Method for Calculating the Specific Surface Area of Activated Carbons

Sarra Gaspard¹, Nady Passé-Couttrin¹, Sandro Altenor¹, Daniel Cossement², Corine Jean-Marius¹, Alex Ouensanga¹ (¹Univ. of Antilles et de la Guyane, France) (²Univ. du Québec, Canada) 71

15D-pm-07 16:00 – 16:20

Surfactant Self-assembly to Form Mesoporous Carbons with Controlled Mesostructure

Wenming Qiao¹, Donghui Long¹, Hongpeng Liu¹, Rui Zhang¹, Liang Zhan¹, Licheng Ling¹ (¹East China Univ. of Science and Technology, China) 71

15D-pm-08 16:20 – 16:40

Preparation and Characterization of Carbon Aerogel Spheres

Qing-han Meng¹, Qing-han Meng¹, Xiao-hong Xu¹, Bing Cao¹ (¹Beijing Univ. of Chemical Technology, China) 72

15D-pm-09 16:40 – 17:00

Correlations between Activated Carbon Properties and Photocatalytic Activity of TiO₂ in 4-chlorophenol Degradation

Juan Matos¹, Tulyan Cordero¹, Jean-Marc Chovelon², Corinne Ferronato² (¹Venezuelan Institute for Scientific Research, Venezuela) (²IRCELYON, France) 72

15D-pm-10 17:00 – 17:20

Decoration of Multi-Walled Carbon Nanotube with Well Dispersion TiO₂

Shuo Wang¹, Ji Liang¹, Qian Ming Gong¹ (¹Tsinghua Univ., China) 73

15D-pm-11 17:20 – 17:40

Field Emission Property of the Needle-shaped Carbons by Cold Plasma Improvement

Masaaki Katoh¹, Takeo Ohte¹, Michiya Ota¹, Eiichi Yasuda² (¹Gunma National College of Technology, Japan) (²Tokyo Institute of Technology, Japan) 73

15D-pm-12 17:40 – 18:00

Advanced Physical Adsorption Characterization of Nanoporous Carbon Materials

Matthias Thommes (Quantachrome Instruments, USA) 74

18:20 – 20:30

POSTER SESSION 2

CARBON 2008 Conference Program Oral

Oral Sessions

WEDNESDAY, JULY 16, 2008

16AM1 Metropolitan

8:00 - 8:30 Asama B, C INFORMATION

8:30 - 9:20 Asama B, C PLENARY LECTURE

Professor David Tomanek (Michigan State Univ., USA)

“When Carbon Stops Being Carbon”

Chair: Prof. Toshiaki Enoki (Tokyo Institute of Technology, Japan)

9:20 – 9:50 BREAK Metropolitan Lobby 3F, Asama B, Lobby 2F, Sunroute Lobby 3F

16AM2 (ORAL SESSION 7)

Session A

Metropolitan Room Asama A

NANOTUBES

Chairs: Dr. Marc Monthieux (CNRS, France)

Prof. Hiroyuki Muramatsu (Shinshu Univ., Japan)

16A-am-01 09:50 – 10:20 KEYNOTE LECTURE

Optical Modulation of Single Walled Carbon Nanotubes for Biomedical Applications

Prof. M. S. Strano (MIT, USA) 75

16A-am-02 10:20 – 10:40

Synthesis of Molybdenum Atomic Wires Incorporated within Double-Walled Carbon Nanotubes

Hiroyuki Muramatsu¹, Takuya Hayashi¹, Yoong Ahm Kim¹, Daisuke Shimamoto¹, Morinobu Endo¹, Mauricio Terrones², Mildred S Dresselhaus³ (¹Shinshu Univ., Japan), (²IPICYT, Mexico) (³MIT, USA) 76

16A-am-03 10:40 – 11:00

Surface Modification and Polymeric Composites of BN Nanotubes

Chunyi Zhi¹, Bando Yoshio², Chengchun Tang², Dmitri Golberg² (¹National Institute for Materials Science, Japan) (²NIMS, Japan) 76

16A-am-04 11:00 – 11:20

Nanofabrication of Single-wall Carbon Nanotubes Using a Metal Nitrate

Katsuyuki Murata¹, Tatsuaki Ataka¹ (¹Olympus Co., Japan) 77

16A-am-05 11:20 – 11:40

Evaluation of Residual Iron Compound in Isothermally Treated Catalytic Chemical Vapor Deposited MWNT

Jin Chen¹, Takayuki Tsukada¹, Akihito Kuno², Motoyuki Matsuo², Yoong Ahm Kim³, Takuya Hayashi³, Morinobu Endo³ (¹Nano Carbon Technologies Co., Japan) (²The Univ. of Tokyo, Japan) (³Shinshu Univ., Japan) 77

16A-am-06 11:40 – 12:00

Purification and Assessment of Multi-walled Carbon Nanotubes Produced via Metal-catalysed CVD Synthesis

Aidan V K Westwood¹, Vinay Ranganathan¹, Andy Brown¹, Ali-Reza Mirhabibi², Xuanke Li³ (¹Univ. of Leeds, UK) (²Iran Univ. of Science and Technology, Iran) (³Wuhan Univ. of Science and Technology, P. R. China) 78

12:00 – 13:10 LUNCH

Metropolitan Asama B, C and Chikuma

Session B

Metropolitan Room Azusa

CARBON FIBERS AND COMPOSITES

Chairs: Prof. Shin R Mukai (Hokkaido Univ., Japan)

Prof. Ling-Jun Guo (Northwestern Poy. Univ., China)

16B-am-01 9:50– 10:10

Kinetics of Chemical Vapor Infiltration and Mechanical Properties of Carbon Nanofiber Reinforced Carbon/Carbon Composites

Jin Song Li¹, Rui Ying Luo¹ (¹Beijing Univ. of Aeronautics and Astronautics, China) 78

16B-am-02 10:10 – 10:30

Contact Deformations of Graphite Particulate Composites Applied to Sliding Components

Takatoshi Futami¹, Eiichiro Ugumori¹, Hiroyuki Muto¹, Masahiko Ohira², Mototsugu Sakai¹ (¹Toyohashi Univ. of Tech., Japan) (²Fuji Carbon Manufacturing Co., Japan) 79

16B-am-03 10:30 – 10:50

Friction and Wear of Carbon/Carbon Composites: the Role of Mechanic and Physico-chemistry

Sylvie Alice Bonnamy¹, Haytam Kasem¹, Bernard Rousseau¹, Henriette Estrade-Szwarckopf¹, Yves Berthier², Pascale Jacquemard³ (¹CRMD/CNRS-Univ., France) (²CNRS-INSa, France), (³Messier-Bugatti, USA) 79

16B-am-04 10:50 – 11:10

Carbon Coating on the Surface of SiC-based Fibers

Adrien Delcamp¹, Rene Pailler¹, Herve Plaisantin², Laurence Maille¹ (¹Laboratoire des Composites Thermostructuraux (LCTS), France) (²SPS, France) 80

16B-am-05 11:10 – 11:30

A Generalized Synthesis of Carbon / Metal or Metal Oxide Nanocomposites and Their Corresponding Metal Oxide Hollow or Mesoporous Spheres Using a Hydrothermal Approach

Maria M Titirici¹, Rezan Demir-Cakan¹, Philippe Makowski¹, Frederic Goettman¹, Yong Sheng Hu² (¹Max-Planck Institute, Germany) (²Max-Planck Institute for Solid State Research, Germany) 80

16B-am-06 11:30 – 11:50

Purification and Modification of Carbon Nanocapsules as a Magnetic Carrier for Drug Delivery System

Sung Hoon Kim (Tohoku Univ., Japan) 81

12:00 – 13:10 LUNCH

Metropolitan Asama B, C and Chikuma

CARBON 2008 Conference Program Oral

Oral Sessions WEDNESDAY, JULY 16, 2008

16PM1 (ORAL SESSION 8)

Session A

Metropolitan Room Asama A

NANOTUBES

Chairs: Dr. Sivaram Arepalli (NASA, USA)

Prof. Tatsuhiro Takahashi (Yamagata Univ., Japan)

16A-pm-01 13:10 – 13:40 KEYNOTE LECTURE

Self-Retracting Motion of Graphite Microflakes

Prof. Quan-shui Zheng¹, Bo Jiang¹, Shou-peng Liu², Jing Zhu¹, Qing Jiang³, Yu-xiang Weng², Li Lu², Sheng Wang⁴, Qi-kun Xue², Lian-mao Peng⁴ (¹Tsinghua Univ., China) (²Institute of Physics, Chinese Academy of Science, China) (³Univ. of California, USA) (⁴Peking Univ., China) 81

16A-pm-02 13:40 – 14:00

Alignment of Vapor-Grown Carbon Fibers in Polymer by Magnetic or Electric Field and Its Application

Tatsuhiro Takahashi¹, Hiroshi Awano¹, Koichiro Yonetake¹, Morinobu Endo² (¹Yamagata Univ., Japan) (²Shinshu Univ., Japan) 82

16A-pm-03 14:00 – 14:20

Synthesis and Application of Fe-filled Carbon Nanotubes Coated with FeCo Nanoparticles

Chen Wang¹, Feiyu Kang¹, Ruitao Lv¹, Jialin Gu¹, Xuchun Gui¹, Dehai Wu¹ (¹Tsinghua Univ., China) 82

16A-pm-04 14:20 – 14:40

Synthesis and Characterization of Carbon Nanotube/Magnesium Alloy Composites Well Dispersed by Using a Block Copolymer

Qianqian Li¹, Christian A. Rottmair¹, Robert F. Singer¹ (¹Univ. of Erlangen-Nuremberg, Germany) 83

16A-pm-05 14:40 – 15:00

Fluorine Storage in Single-wall Carbon Nanohorns

Hidekazu Touhara¹, Ken Denuma¹, Yoshio Nojima¹, Yoshiyuki Hattori¹, Fujio Okino¹, Jun Sonobe², Tomohiro Isogai³, Masako Yudasaka⁴, Sumio Iijima^{4,5} (¹Shinshu Univ., Japan) (²Air Liquide Labs., Japan) (³Daikin Industries, Japan) (⁴NEC Corp., Japan) (⁵Meijo Univ., Japan) 84

16A-pm-06 15:00 – 15:20

Gigas Growth of Carbon Nanotubes from Camphor: A Step toward Green Nanotechnology

Mukul Kumar¹, Kaushik Ghosh¹, Yoshinori Ando¹ (¹Meijo Univ., Japan) 85

15:20 – 15:40 Coffee Break

Metropolitan Lobby 3F, Asama B, Lobby 2F,
Sunroute Lobby 3F

Session B

Metropolitan Room Azusa

CARBON FIBERS AND COMPOSITES

Chairs: Prof. Takeshi Fukuda (Kyoto Univ., Japan)

Prof. Maria M Titirici (Max-Planck Institute, Germany)

16B-pm-01 13:10 – 13:30

CN_x Based Nanocomposite as Adsorbent of Heavy Metals (Cd, Pb) Present in Aqueous Solution

Nancy V Pérez-Aguilar¹, Jose R. Rangel-Mendez¹, Vladimir A. Escobar-Barrios², Humberto Terrones¹, Emilio Muñoz-Sandoval¹ (¹IPICYT, Mexico) (²3M México S.A. de C.V., Mexico) 91

16B-pm-02 13:30 – 13:50

Polymer Coatings Hybridized with Highly Dispersive, Polymer-Grafted Carbon Nanotubes: Their Excellent Mechanical and Anti-corrosive Properties

Takeshi Fukuda¹, Shoji Kuroyama², Takuma Nakao², Senta Tojo², Kohji Ohno¹ (¹Kyoto Univ., Japan) (²Takenaka Seisakusho Co., Japan) 92

16B-pm-03 13:50 – 14:10

Effects of Carbon Nano-Fibers on Cell Morphology, Crush Strength, and Thermal Conductivity of Carbon Foam

William E. Fawcett¹, Dinesh Shetty¹ (¹Univ. of Utah, USA) 92

16B-pm-04 14:10 – 14:30

Effects of the Carrier Gas in the Production of Carbon Nanofibers Using the Liquid Pulse Injection Technique

Shin R. Mukai¹, Yoshihiko Hayashida¹, Atsushi Ikeshita¹ (¹Hokkaido Univ., Japan) 93

16B-pm-05 14:30 – 14:50

Effect of the Molding Pressure on Compressive Strength of Pitch-based Carbon Materials

Ling-jun Guo¹, He-jun Li¹, Ke-zhi Li¹, Zheng-hai Shi¹, Chuang Wang¹ (¹Northwestern Polytechnical Univ., China) 93

16B-pm-06 14:50 – 15:10

Novel Tactile/Proximity Sensing Properties of Carbon Microcoils

Xiuqin Chen¹, Shaoming Yang², Izumi Ozeki², Seiji Motojima², Hideki Sakai¹, Masahiko Abe¹ (¹Tokyo Univ. of Science, Japan) (²Gifu Univ., Japan) 94

15:20 – 15:40 Coffee Break

Metropolitan Lobby 3F, Asama B, Lobby 2F,
Sunroute Lobby 3F

CARBON 2008 Conference Program Oral

Oral Sessions WEDNESDAY, JULY 16, 2008

16PM2 (ORAL SESSION 9)

Session A

Metropolitan Room Asama A

NANOTUBES

Chairs: Prof. Quanshui Zheng (Tsinghua Univ., China)

Prof. Hidekazu Touhara (Shinshu Univ., Japan)

16A-pm-07 15:40 – 16:10 KEYNOTE LECTURE

Carbon Nanotube Growth Mechanisms- “In-situ and Ex-situ” Studies

Dr. Sivaram Arepalli (NASA, USA) 85

16A-pm-08 16:10 – 16:40 INVITED LECTURE

Meta-nanotubes: The New Generation of Carbon Nanotubes

Dr. Marc Monthieux¹, Dmitri Golberg², Alain Pénicaud¹, Maurizio Prato³, Philippe Serp⁴, Jeremy Sloan⁵ (¹CNRS, France) (²National Institute for Materials Science, Japan) (³Univ. of Trieste, France) (⁴LCC- CNRS, Toulouse, France) (⁵Queen Mary Univ. of London, UK) 86

16A-pm-09 16:40 – 17:00

New Concepts in Organic Solar Cells Using Carbon Nanomaterials

Prakash R. Somani¹, Savita P. Somani¹, M. Umeno¹ (¹Chubu Univ., Japan) 86

16A-pm-10 17:00 – 17:20

Lithium Ion Storage Property of Organic Molecules Encapsulated Single-walled Carbon Nanotubes

Shinji Kawasaki¹, Yuki Iwai¹, Masahito Hirose¹ (¹Nagoya Institute of Technology, Japan) 87

16A-pm-11 17:20 – 17:40

In-situ Raman Spectroelectrochemistry of Single-walled Carbon Nanotubes: Investigation of Materials Enriched with the (6,5) Tubes

Ladislav Kavan¹, Otakar Frank¹, Alexander A. Green², Mark C. Hersam², János Koltai³, Viktor Zólyomi⁴, Jeno Kürti³, Lothar Dunsch⁵ (¹J. Heyrovsky Institute of Physical Chemistry, Czech Republic) (²Northwestern Univ., USA) (³Eötvös Univ., Republic of Hungary) (⁴Research Institute for Solid State Physics and Optics of the Hungarian Academy of Sciences, Republic of Hungary) (⁵Leibniz Institute of Solid State and Materials Research, Germany) 87

16A-pm-12 17:40 – 18:00

Catalytic Graphitization Occurring at High Temperature in Multi-walled Carbon Nanotubes Prepared with a CVD Method

Yoshihiro Hishiyama¹, Akira Yoshida¹, Emi Shindou¹, Yutaka Kaburagi¹, Yoshio Yamasa², Noriko Yoshizawa³, Hiroaki Hatori³ (¹Musashi Institute of Technology, Japan) (²Univ. of Fukui, Japan) (³National Institute of Advanced Industrial Science and Technology (AIST), Japan) 88

Session B

Metropolitan Room Azusa

CARBON FIBERS AND COMPOSITES

Chairs: Prof. Takashi Nishizawa (Tokyo Institute of Tech., Japan)

Prof. Lalit M. Manocha (Sardar Patel Univ., India)

16B-pm-07 15:40 – 16:00

Enhancing the Through-thickness Thermal Conductivity of Carbon Fiber Polymer-matrix Composites by Nanostructuring the Interlaminar Interface

Seungjin Han¹, Jan T. Lin¹, Yasuhiro Yamada¹, Deborah D.L. Chung¹ (¹State Univ. of New York at Buffalo, USA) 94

16B-pm-08 16:00 – 16:20

The Effect of Chemical Modified PAN Precursor on the Preparation of Carbon Fiber

Jie Liu¹, Dayan Du¹, Jieying Liang¹ (¹Beijing Univ. of Chemical Technology, China) 95

16B-pm-09 16:20 – 16:40

Flexible EL Device with CNTs Composites

Mun Ja Kim¹, Sung Min Park¹, Dong-wook Shin¹, Sang Hyun Park², Jin Yong Kim¹, Ji-beom Yoo¹ (¹Sungkyunkwan Univ., Korea) (²Samsung Advanced Institute of Technology, Korea) 95

16B-pm-10 16:40 – 17:00

Effects of Carbon Nanotubes Addition on Synthesis of Mesocarbon Microbeads

Bin Wu¹, Qianming Gong¹, Ji Liang¹ (¹Tsinghua Univ., China) 96

16B-pm-11 17:00 – 17:20

Characterization of 2D-C/C Composite for Application to In-core Structure of Very High Temperature Reactor (VHTR)

Taiju Shibata¹, Junya Sumita¹, Eiji Kunimoto¹, Kazuhiro Sawa¹ (¹JAEA, Japan) 96

16B-pm-12 17:20 – 17:40

Damage Fractography of Ceramic Fibre Composite at Elevated Temperature under Loads

Vijay Kumar Srivastava¹, Shraddha Singh¹ (¹Institute of Technology, BHU, India) 97

16B-pm-13 17:40 – 18:00

Research on Oxidation Protection of Carbon/Carbon Composites above 1750°C

Zhongwei Zhang¹, Zhenghui Xu¹, Junshan Wang¹ (¹Aerospace Research Institute of Materials and Processing Technology Beijing, China) 97

18:20 – 20:30

POSTER SESSION 3

16A-pm-13 18:00 - 18:20

Multiscale Modelling of Nanomaterials: Fundamentals and Applications for Molecular Manufacturing

Elena Bichoutskaia (Univ. of Nottingham, UK) 89

16A-pm-14 18:20 - 18:40

Catalytic Growth of Carbon Nanotubes on Zeolites

Nadejda Popovska¹, Katva Danova¹, Nazret Telemicael¹, Helmut Gerhard¹, Wilhelm Schwieger¹ (¹Univ. of Erlangen-Nuremberg, Germany) 89

16A-pm-15 18:40 - 19:00

Molecular-level-dispersed Carbon-nanotubes as Dyes for Dyeing-printing of Fibers: A Novel Approach for Mass-production of Electrical-conductive Multifilament Yarns

Bunshi Fugetsu¹, Eiji Akiba², Masaaki Hachiya³, Morinobu Endo⁴ (¹Hokkaido Univ., Japan) (²Kurary Living Co., LTD., Japan) (³Chakyu Dyeing Co., LTD., Japan) (⁴Shinshu Univ., Japan) 90

18:20 – 20:30

POSTER SESSION 3

CARBON 2008 Conference Program Oral

Oral Sessions WEDNESDAY, JULY 16, 2008

16AM2 (ORAL SESSION 7)

Session C

Metropolitan Room Shiga **CHEMICAL PROPERTIES**

Chairs: Prof. Diego Cazorla-Amoros (Alicante Univ., Spain)

Prof. Masashi Kijima (Tsukuba Univ., Japan)

16C-am-01 9:50 – 10:20 FEATURED LECTURE

Intercalation Chemistry and Electronic Structure of Graphite-like Layered Material with Composition BC₂N

Prof. Masayuki Kawaguchi¹, Katsuya Ohnishi¹, Shinya Kuroda¹, Yasuji Muramatsu² (¹Osaka Electro Communication Univ., Japan) (²Univ. of Hyogo, Japan)

98

16C-am-02 10:20 – 10:50 FEATURED LECTURE

Characterization and Reactions of Silylated Graphite Oxides

Prof. Yoshiaki Matsuo¹, Yoshimasa Sakai¹, Tomokazu Fukutsuka², Yosohiro Sugie¹ (¹Univ. of Hyogo, Japan) (²Kyoto Univ., Japan)

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16C-am-03 10:50 – 11:10

Electronic Structure and Features of the Arene Molecules Oxidation in Elementary Textural Nanofragments of the Carbon Materials

Victor P. Berveno¹, Lev I. Shchukin¹, Margarita V. Kornievich¹, Sergey Yu. Lyrshchikov¹, Vitaliy M. Grigoriev¹ (¹Institute of Solid State Chemistry and Mechanochemistry, Russia)

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16C-am-04 11:10 – 11:30

Study of Activated Carbon Oxygen Groups by a New Fast Intermittent TPD Technique

Jean-Pierre Joly¹, François Gaillard¹, Claude Descorme¹, Michèle Besson¹, Elena Polyanskaya², Oxana Pestunova² (¹Univ. of Lyon, France) (²Boreskov Institute of Catalysis, Russia)

99

16C-am-05 11:30 – 11:50

Oxidation Resistance of Advanced Carbon Based Materials

Baerbel Schloegl¹, Hans K. Hinssen¹, Rainer Moormann¹ (¹Research Center Juelich, Germany)

100

16C-am-06 11:50 – 12:10

Carbon Growth by the Atomic Carbon Insertion Reactions: The Simplest Carbon Reaction.

Teruhiko Ogata¹, Yoshio Tatamitani¹, Yutaka Shibi¹ (Shizuoka Univ., Japan)

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12:10 – 13:10 LUNCH

Metropolitan Asama B, C and Chikuma

Session D

Sunroute Nagano Room Hiten **ENVIRONMENT AND ENERGY**

Chairs: Dr. Noriko Yoshizawa (AIST, Japan)

Prof. Wolfgang A Klose (Univ. of Kassel, Germany)

16D-am-01 9:50 – 10:20 INVITED LECTURE

Ozone Treated Carbon Surfaces for Enhanced Adsorption of Mercury Vapor

Indrek Kulaots¹, Shawn Manchester¹, Chris Wang¹, Robert H. Hurt¹ (¹Brown Univ., USA)

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16D-am-02 10:20 – 10:40

Adsorption of VOCs Using Binderless-monolithic Activated Carbons Prepared from Petroleum Mesophase Pitch

Joaquin Silvestre-Albero¹, Ana Maria Silvestre-Albero¹, Jose Manuel Ramos-Fernández¹, Manuel Martínez -Escandell¹, Antonio Sepúlveda-Escribano¹, Francisco Rodríguez-Reinoso¹ (¹Univ. of Alicante, Spain)

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16D-am-03 10:40 – 11:00

Diminish VOC Emission in Iron Foundries by a Cost Effective In-situ Pyrolyzed Carbon

He Huang¹, Yujue Wang¹, Fred S Cannon¹ (¹Pennsylvania State Univ., USA)

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16D-am-04 11:00 – 11:20

Hydrogen Evolution from Decalin over Precious Metal Catalysts Supported on Carbon Nanofibers and Their Structured Composite

Ping Li¹, Yi-Li Huang¹, De Chen², Xing-Gui Zhou¹, Tie-Jun Zhao², Wei-Kang Yuan¹ (¹East China Univ. of Science and Technology, China) (²Norwegian Univ. of Science and Technology, Norway)

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16D-am-05 11:20 – 11:40

Preparation and Properties of PET-based Porous Carbon

Jacek Przepiorski¹, Antoni W. Morawski¹, Koichiro Tsumori², Tomoki Tsumura², Beata Tryba¹, Masahiro Toyoda² (¹Szczecin Univ. of Technology, Poland) (²Oita Univ., Japan)

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16D-am-06 11:40 – 12:00

Development of Charcoal for Castings by Using Biomass Resources

Kouhei Hasegawa¹, Yuuichi Shinoda¹, Kazuki Shiba¹, Yasunori Doi², Toyoshi Manabe³, Mitsuhiro Sakawa¹ (¹Kochi Univ. of Technology, Japan) (²Tokushu Steelworks Company, Japan) (³Kochi Prefecture Industrial Technology Center, Japan)

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12:00 – 13:10 LUNCH

Metropolitan Asama B, C and Chikuma

CARBON 2008 Conference Program Oral

Oral Sessions WEDNESDAY, JULY 16, 2008

16PM1 (ORAL SESSION 8)

Session C

Metropolitan Room Shiga

PHYSICAL PROPERTIES

Chairs: Dr. Vladimir Yu Osipov (Ioffe Fisuc-Technical Institute, Russia)

Dr. Stephan Roche (MINATEC, France)

16C-pm-01 13:10 – 13:40 INVITED LECTURE

Charge Transport in Chemically-Doped Carbon based Materials

Dr. Stephan Roche (MINATEC, France) 104

16C-pm-02 13:40 – 14:00

Novel Physisorption-induced Magnetic Switching Phenomenon in Activated Carbon Fibers

Toshiaki Enoki¹, Katsunori Takahara¹, Naoki Kawatsu¹, Kazuyuki Takai¹, Hirohiko Sato¹ (¹Tokyo Institute of Technology, Japan) 104

16C-pm-03 14:00 – 14:20

Thermal Properties and Tribological Properties of Tetrahedral Amorphous Carbon (Ta-C) Films

Seiichi Miyai¹, Tomohiro Kobayashi², Takayuki Terai¹ (¹Univ. of Tokyo, Japan) (²RIKEN, Japan) 105

16C-pm-04 14:20 – 14:40

The Ballistic Phonon Drag of Electrons as a Cause of High Thermoelectric Effect in Nanocarbon

Evgeny D. Eydelman¹, Alexander Y. Vul¹ (¹Ioffe Fisuc-Technical Institute, Russia) 105

16C-pm-05 14:40 – 15:00

Magnetic Studies of Ultrananocrystalline Diamonds Intercalated by Copper

Vladimir Yu. Osipov¹, Alexander I. Shames², Alexander E. Aleksenskiy¹, Alexander M. Panich², Toshiaki Enoki³, Kazuyuki Takai³, Alexander Ya. Vul¹ (¹Ioffe Physico-Technical Institute, Russia) (²Ben-Gurion Univ. of the Negev, Israel) (³Tokyo Institute of Technology, Japan) 106

16C-pm-06 15:00 – 15:20

Modelling the Fracture of Nuclear Graphites with Scale

Gareth B Neighbour¹, Chris Lynch¹, Matt J. Holt¹ (¹Univ. of Hull, UK) 106

15:20 – 15:40 Coffee Break

Metropolitan Lobby 3F, Asama B, Lobby 2F,
Sunroute Lobby 3F

Session D

Sunroute Nagano Room Hiten

ENVIRONMENT AND ENERGY

Chairs: Prof. Jun-ichi Ozaki (Gunma Univ., Japan)

Prof. Antoni Morawski (Szczecin Univ., Poland)

16D-pm-01 13:10 – 13:40 FEATURED LECTURE

Application of Nitrogen-Rich Amino Acids to Active Site Generation in Oxygen Reduction Catalyst

Dr. Jun Maruyama¹, Nobutaka Fukui², Masayuki Kawaguchi², Ikuo Abe¹ (¹Osaka MTRI, Japan) (²Osaka Electro-Communication Univ., Japan) 110

16D-pm-02 13:40 – 14:00

Development of a Zero-Emission Carbon Fuel Cell Using Hydrothermally Carbonized Biomass as Fuel

Jens Peter Paraknowitsch¹, Arne Thomas¹, Markus Antonietti¹ (¹Max-Planck Institute of Colloids and Interfaces, Germany) 111

16D-pm-03 14:00 – 14:20

Kinetics of Cellulose Pyrolysis under Mechanical Pressure

Mingbo Wu¹, Gabor Varhegyi², Zsuzsanna Novák Czégény², Kouichi Miura³, Ryuichi Ashida³, Zhonghao Hu⁴, Qingfang Zha¹, Jian Zhang⁴ (¹China Univ. of Petroleum, China), (²Central Research Institute for Chemistry of the Hungarian Academy of Sciences, Hungary) (³Kyoto Univ., Japan), (⁴Shengli Oilfield, P. R. China) 111

16D-pm-04 14:20 – 14:40

Hydrothermal Carbonization of Plant Material: A Route to Nanostructured Carbonaceous Materials and an Efficient Chemical Process to Treat the CO₂ Problem

Maria M. Titirici¹, Arne Thomas¹, Markus Antonietti¹ (¹Max-Planck Institute of Colloids and Interfaces, Germany) 112

16D-pm-05 14:40 – 15:00

Development of Plant Cultivation Floor of Charcoal Produced from Used Paper Mixed with Unused Woody Resources

Yasuhiro Shimase¹, Tomoyuki Amano¹, Syota Ishikawa¹, Michiyasu Motoike¹, Hiroko Yamamoto¹, Mitsuhiro Sakawa¹ (¹Kochi Univ. of Technology, Japan) 112

16D-pm-06 15:00 – 15:20

A Chemical Microsystem for Selective Detection of Air Polluting Gases

Marc Dubois^{1,2}, Vicente Parra², Alain Pauly², Christelle Varenne², Bernard Lauron², Marcel Bouvet³, Katia Guérin², André Hamwi², Jérôme Brunet² (¹Univ. Blaise Pascal, France) (²Clermont Univ., France) (³Univ. Pierre, France) 113

15:20 – 15:40 Coffee Break

Metropolitan Lobby 3F, Asama B, Lobby 2F,
Sunroute Lobby 3F

CARBON 2008 Conference Program Oral

Oral Sessions WEDNESDAY, JULY 16, 2008

16PM2 (ORAL SESSION 9)

Session C

Metropolitan Room Shiga

CHARACTERIZATION

Chairs: Prof. A. Oberlin (CNRS, France)

Dr. N. Iwashita (AIST, Japan)

16C-pm-07 15:40 – 16:10 INVITED LECTURE

Adsorption of Argon, Nitrogen and Water in Carbon Nanotube Bundles: Computer Simulation and Experiment Studies

Prof. Duong D Do¹, Atichat Wongkoblap¹ (¹Univ., of Queensland, Australia) 107

16C-pm-08 16:10 – 16:40 FEATURED LECTURE

TEM Observation and Microanalysis of the Surface Coating Films Formed on Carbon Nanospheres in the Negative Electrodes of Li Ion Batteries

Dr. Noriko Yoshizawa¹, Yasushi Soneda¹, Hiroaki Hatori¹, Kazuo Yoshikawa², Koji Miura², Takeshi Abe³ (¹National Institute of Advanced Industrial Science and Technology (AIST), Japan) (²Tokai Carbon Co., Japan) (³Kyoto Univ., Japan) 107

16C-pm-09 16:40 – 17:00

Characterization of Catalyst Particles for Carbon Nanotube Synthesis by Time-resolved Laser-induced Incandescence

Alfred Leipertz¹, Roland Sommer¹, Katya Danova¹, Nadejda Popovska¹ (¹Univ. of Erlangen-Nuremberg, Germany) 108

16C-pm-10 17:00 – 17:20

Dense-Gas Fractionation and MALDI-TOF Characterization of Petroleum Pitches

Eduardo G. Cervo¹, Mark C. Thies¹, Bahram Fathollahi² (¹Clemson Univ., USA) (²Univ. of California, USA) 108

16C-pm-11 17:20 – 17:40

Structure of Glucose-derived Hydrothermal Carbon: an Advanced Solid-state MAS ¹³C NMR Study

Niki Baccile¹, Niki Baccile¹, Guillaume Laurent², Florence Babonneau², Maria-Magdalena Titirici¹, Markus Antonietti¹ (¹Max-Planck Institute, Germany) (²LCMCP-UMPC, France) 109

16C-pm-12 17:40 – 18:00

Amorphous Carbon Thin Films: Synthesis and Characterizations

Hare Ram Aryal¹, Sudip Adhikari¹, Dilip Chandra Ghimire¹, Golap Kalita¹, Ishwor Khatri², Hideo Uchida¹, Tetsuo Soga², Masayoshi Umeno¹ (¹Chubu Univ., Japan) (²Nagoya Institute of Technology, Japan) 109

16C-pm-13 18:00 – 18:20

Interstellar Dust Grains Composition: the Hydrogenated Amorphous Carbon Contribution

Emmanuel Dartois¹, Guillermo M. Munoz-Caro² (¹CNRS, France) (²INTA-CSIC, Spain) 110

18:20 – 20:30

POSTER SESSION 3

Session D

Sunroute Nagano Room Hiten

ENVIRONMENT AND ENERGY

Chairs: Dr. Zheng-Ming Wang (AIST, Japan)

Dr. Cathie Vix-Guterl (ISIC/CNRS, France)

16D-pm-07 15:40 – 16:00

Improvement in Crystallinity and Photocatalytic Activity of Titania by Carbon-Coating

Tomoki Tsumura¹, Kazuo Sogabe¹, Michio Inagaki², Masahiro Toyoda¹ (¹Oita Univ., Japan) (²Aichi Institute of Technology, Japan) 113

16D-pm-08 16:00 – 16:20

The Use of Fossil Hydrocarbons to Promote Renewable Energy and Carbon Sequestration

Jorge Laine (IVIC, Venezuela) 114

16D-pm-09 16:20 – 16:40

A New Class of Adsorbent with Dual Functions of Adsorptivity and Photoactivity: Hypernetworked Carbon/Titania Hybrid Composite

Ji Hyuk Im¹, Hyeon Gu Cho¹, Chang Hoon Yoon², Chong Rae Park¹ (¹Seoul National Univ., Korea) (²LG Chem Research Park, Korea) 114

16D-pm-10 16:40 – 17:00

Removal of Nickel (II) by Adsorption Using Treated Granular Activated Carbon: Batch and Column Studies

Ulker Gurbuz Beker¹, Dilek Duranoglu Gulbayir¹, Semiha Murat¹ (¹Yildiz Technical Univ., Turkey) 115

16D-pm-11 17:00 – 17:20

Elucidating the Adsorption of Trace Endocrine Disruptors and Pharmaceuticals on Tailored Activated Carbons Using a Quantitative Structure-Activity Relationship

Adam M. Redding¹, Fred S. Cannon¹, Shane A. Snyder², Brett J. Vanderford² (¹Pennsylvania State Univ., USA) (²Southern Nevada Water Authority, USA) 115

16D-pm-12 17:20 – 17:40

Characterization of Lithium-ion Cell Based on Carbonized Wood Sintered under High Pressure

Toshimitsu Hata¹, Yasin Eker², Sylvie Bonnamy², François Béguin² (¹Kyoto Univ., Japan) (²CNRS-Univ., France) 116

18:20 – 20:30

POSTER SESSION 3

CARBON 2008 Conference Program Oral

Oral Sessions

THURSDAY, JULY 17, 2008

17AM1 Metropolitan

8:00 - 8:30 Asama B, C **INFORMATION** (Announcement of coming international conferences)

8:30 - 9:20 Asama B, C **PLENARY LECTURE**

Professor Mauricio Terrones (IPICyT, Mexico)

“Defect Detection and Defect Engineering in Nano carbons: An Alternative Route to Novel Devices”

Chair: Prof. Takuya. Hayashi (Shinshu University, Japan)

9:20 - 9:50 BREAK Metropolitan Lobby 3F, Asama B, Lobby 2F, Sunroute Lobby 3F

17AM2 (ORAL SESSION 10)

Session A

Hotel Metropolitan Room Asama A

NANOTUBES

Chairs: Prof. D. Tomanek (Michigan St. Univ., USA)

Prof. Riichiro Saito (Tohoku Univ., Japan)

17A-am-01 9:50 - 10:20 KEYNOTE LECTURE

Recent Advances in Carbon Nanotube Research

Prof. Mildred S. Dresselhaus¹, Prof. Gene Dresselhaus¹
(¹MIT, USA) 117

17A-am-02 10:20 - 10:50 FEATURED LECTURE

Manipulating the Current Conductivity of Halide-filled Multi-walled Carbon Nanotubes

Dr. Pedro MFJ Costa¹, Dmitri Golberg¹, Masanori Mitome¹, Yoshio Bando¹ (¹NIMS, Japan) 117

17A-am-03 10:50 - 11:10

Characterization of the Surface Nature of Carbon Nanotubes by Inverse Gas Chromatography

Hyeon Gu Cho¹, Chong Rae Park¹ (¹Seoul National Univ., Korea) 118

17A-am-04 11:10 - 11:30

Temperature Effects in Raman Spectra from Single-walled Carbon Nanotubes and Assignments of Their Chiral Indices at High Temperature

Takashi Uchida^{1,2}, Akira Yamazaki^{1,3}, Yoshihiro Kobayashi^{1,2} (¹NTT Basic Research Laboratories, Japan) (²CREST/JST, Japan) (³Meiji Univ., Japan) 118

17A-am-05 11:30 - 11:50

Dispersion and Individualization of Single Walled Carbon Nanotubes through an Alkali Vapor Intercalation Process

Brigitte Vigolo¹, Claire Hérold¹, Jean-François Maréché¹, Patrice Bourson², Samuel Margueron², Jaafar Ghanbaja¹, Edward McRae¹ (¹Laboratoire de Chimie du Solide Minéral, France) (²Laboratoire Matériaux Optiques, Photoniques et Systèmes, France) 119

12:00 - 18:00 Excursion (Lunch: Oginoya)

Special lectures (Suzaka Mesena Hall)

18:30 - 21:30 Banquet Metropolitan Asama A, B, C

Session B

Hotel Metropolitan Room Azusa

CARBON FIBERS AND COMPOSITES

Chairs: Prof. Michiya Ota (Gunma College of Tech., Japan)

Prof. De Chen (NTNU, Norway)

17B-am-01 9:50 - 10:20 INVITED LECTURE

Carbon-Carbon Composite Material as a Catalytic Reactor

Prof. De Chen¹, Nina Hammer¹, Magnus Rønning¹
(¹NTNU, Norway) 119

17B-am-02 10:20 - 10:40

Resistance of Multi-walled Carbon Nanotube/Poly (p-phenylene) Composite for Toluene Detection

Adi Ilcham¹, Tawatchai Charinpanitkul², Mana Sriyuthsak¹, Apinan Soottitantawata², Amornwong Srisurichan², Noriaki Sano³ (¹Chulalongkorn Univ., Thailand) (²Center of Excellence in Particle Technology, Thailand) (³Hyogo Univ., Japan) 120

17B-am-03 10:40 - 11:00

Study of Wettability and Reactive Infiltration of Carbon by AlSi Alloys

Javier Narciso¹, Noelia Calderon¹, Rayisa Voytovych², Nicolas Eustathopoulos², Francisco Reinoso¹ (¹Alicante Univ., Spain) (²INP de Grenoble, France) 121

17B-am-04 11:00 - 11:20

Acid Modified Cup-Stacked-Type Carbon Nanofibers for Environmental Applications

Guillermo Abdrade-Espinosa¹, Jose Rene Rangel-Mendez¹, Emilio Muñoz-Sandoval¹, Humberto Terrones-Maldonado¹, Mauricio Terrones-Maldonado¹ (¹Institute for Scientific and Technological Research of San Luis Potosi, Mexico) 121

17B-am-05 11:20 - 11:40

Effect of Carbonization Temperature on Emersion of Nano-structured Carbon Materials in Wood Treated with ACQ

Shuji Yoshizawa¹, Michio Ohata¹ (¹Meisei Univ., Japan) 122

12:00 - 18:00 Excursion (Lunch: Oginoya)

Special lectures (Suzaka Mesena Hall)

18:30 - 21:30 Banquet Metropolitan Asama A, B, C

CARBON 2008 Conference Program Oral

Oral Sessions THURSDAY, JULY 17, 2008

17AM2 (ORAL SESSION 10)

Session C

Metropolitan Room Shiga

CHARACTERIZATION

Chairs: Prof. Malcolm. Heggie (Univ. Sussex, UK)

Prof. Yoshihiro Hishiyama (Musashi Institute of Tech., Japan)

17C-am-01 9:50 – 10:20 FEATURED LECTURE

Synthesis of Porous Carbons: A Microscopic View of Physical and Chemical Activation

Dr. Juan M. D. Tascon¹, Juan Paredes¹, Fabian Suarez-Garcia¹, Amelia Martinez-Alonso¹ (¹Institute National of Carbon, Spain) 122

17C-am-02 10:20 – 10:50 FEATURED LECTURE

Formation of Hydrogen and Carbon Nanotubes on Nanometal-Dispersed Single Wall Nanocarbons

Dr. Hirofumi Kanoh¹, Yusuke Aoki¹, Ai Uematsu¹, Koki Urita¹, Daisuke Noguchi¹, Tsutomu Itoh¹, Tomonori Ohba¹, Masako Yudasaka², Sumio Iijima³, Katsumi Kaneko¹ (¹Chiba Univ., Japan) (²JST/SORST, Japan) (³Meijo Univ., Japan) 59

17C-am-03 10:50 – 10:10

X-Ray Tomography for the Investigation of Carbon and Graphite Materials

Felix Eckstorff¹, Christoph Mohr¹, Wilhelm Frohs¹, Franz Fendt¹, (¹SGL Carbon GmbH, Germany) 123

17C-am-04 10:10 – 11:30

Pyrocarbon Deposit on Flexible Graphite Ribbon: Reactivity with Molten Silicon

Mathieu R. Monville¹, Sylvie Bonnamy¹, Marco Schowalter², Christian Belouet³ (¹CNRS-Orleans, France) (Univ. of Bremen, Germany) (³Solarforce, France) 124

17C-am-05 11:30 – 11:50

Extra-terrestrial Carbons and Possible Earth Analogues

Jean-Noël M. Rouzaud¹, Corentin H. LE Guillou¹ (¹CNRS, France) 124

12:00 – 18:00 Excursion (Lunch: Oginoya)

18:30 - 21:30 Banquet Metropolitan Asama A, B, C

Session D

Sunrute Room Hiten

ENVIRONMENT AND ENERGY

Chairs: Prof. Chong R. Park (Seoul National Univ., Korea)

Prof. Kouichi Miura (Kyoto Univ., Japan)

17D-am-01 9:50 – 10:20 FEATURED LECTURE

Carbon Modified TiO₂ Photocatalysts for Water Purification

Dr. Antoni Morawski¹, Magdalena Janus¹, Beata Tryba¹ (¹Szczecin Univ., Poland) 125

17D-am-02 10:20 – 10:40

High Performance PCM-Graphite Heat Storage Systems

Martin U. Christ¹, Oswin Oettinger¹, Wolf Steinmann², Rainer Tamme² (¹SGL Carbon GmbH, Germany) (²DLR Stuttgart, Germany) 125

17D-am-03 10:40 – 11:00

Effect of Carbon Coating and Metal Doping for the Photoactivity of W₁₈O₄₉

Hany Hussein Hemida¹, Michio Inagaki², Tomoki Tsumura¹, Masahiro Toyoda¹ (¹Oita Univ., Japan) (²Aichi Institute of Technology, Japan) 126

17D-am-04 11:00 – 11:20

Titanate Nanotube-Two dimensionally Deposited Carbon Nanosheet Composite

Wen-Qin Peng¹, Yong-Jun¹, Mami Aizawa¹, Zheng-Ming Wang¹, Noriko Yoshizawa¹, Hiroaki Hatori¹, Takahiro Hirotsu¹ (¹National Institute of Advanced Industrial Science and Technology (AIST), Japan) 126

17D-am-05 11:20 – 11:40

Improvement of Fe/Activated Carbon Catalysts for CWPO upon Oxidative Treatment

Juan Zazo¹, Jose Casas¹, Angel Mohedano¹, Juan Rodrigue¹ (¹Universidad Autonoma de Madrid, Spain) 127

12:00 – 18:00 Excursion (Lunch: Oginoya)

18:30 - 21:30 Banquet Metropolitan Asama A, B, C

Special Session THURSDAY, JULY 17, 2008

Special Lecture (Suzaka Mesena Hall)

16:30 – 17:30

Mechanisms of Self Assembly at Nanoscale Dimensions

Sir Harold W. Kroto

The Florida State Univ., USA

CARBON 2008 Conference Program Oral

Oral Sessions

FRIDAY, JULY 18, 2008

18AM1 Metropolitan

8:00 - 8:30 Asama B, C INFORMATION (Announcement of coming international conferences)

8:30 - 9:20 Asama B, C PLENARY LECTURE

Dr. Frederick S. Baker (Oak Ridge National Laboratory, USA)

“A Carbon Cycle: Use of Biomass-based Carbon Fiber Materials for Reduction of Carbon Emissions to the Environment”

Chair: Prof. Michio Inagaki (Aichi Institute of Technology, Japan)

9:20 – 9:50 BREAK Metropolitan Lobby 3F, Asama B, Lobby 2F, Sunroute Lobby 3F

18AM2 (ORAL SESSION 11)

Session A

Metropolitan Room Asama A

NANOTUBES

Chairs: Prof. M. Terrones (IPICYT, Mexico)

Prof. Yoong Ahm Kim (Shinshu Univ., Japan)

18A-am-01 9:50 – 10:20 KEYNOTE LECTURE

Dark and Bright Exciton Energies of Carbon Nanotubes

Prof. Riichiro Saito (Tohoku Univ., Japan) 128

18A-am-02 10:20 – 10:40

Growth of Vertical Aligned Carbon Nanotubes Arrays with Layer Catalysts: A Step Closer to Commercial Realization

Qiang Zhang¹, Mengqiang Zhang¹, Jiaqi Huang¹, Yi Liu¹, Weizhong Qian¹, Yao Wang¹, Guohua Luo¹, Fei Wei¹, (¹Tsinghua Univ., China) 128

18A-am-03 10:40 – 11:00

Optical Resolution of SWNTs through Extraction with Chiral Diporphyrin Nanotweezers

Naoki Komatsu¹, Xiaobin Peng¹, Takahide Kimura¹, Atsuhiko Osuka² (¹Shiga Univ. of Medical Science, Japan) (²Kyoto Univ., Japan) 129

18A-am-04 11:00 – 11:20

Dispersion of Elementary Excitations in Carbon Nanotubes, Graphene Sheets and Graphite Crystals

Victor O. Gubanov¹, Mykola Biliy¹, Larysa O. Komarova¹, Sergiy V. Kovrygin¹, Ludmyla Yu. Matzui¹, Yevgen Melnychuk¹ (¹Kiev National Taras Shevchenko Univ., Ukraine) 129

18A-am-05 11:20 – 11:40

Atomic and Electronic Structure in Collapsed Carbon Nanotubes Evidenced by Scanning Tunneling Microscopy

Cristina E. Giusca¹, Yann Tison², S. Ravi Silva¹ (¹Univ. of Surrey, UK) (²Technical Univ. of Denmark, Denmark) 130

18A-am-06 11:40 – 12:00

One-step and Two-step Self-assembly: Fully Isolated SWCNT-DNA Hybrids and Controllably Rebundled Short SWCNT Ropes

Quan-Hong Yang¹, Qi Wang¹, Dong-Ya Xiang¹, Takashi Kyotani² (¹Tianjin Univ., China) (²Tohoku Univ., Japan) 130

12:10 – 12:30 Closing Address Metropolitan Asama

B, C

Session B

Metropolitan Room Azusa

CARBON FIBERS AND COMPOSITES

Chairs: Prof. Javier Narciso (Alicante Univ., Spain)

Prof. Takatoshi Futami (Toyohashi Univ. of Tech., Japan)

18B-am-01 9:50 – 10:20 INVITED LECTURE

Matrix Microstructure and Properties of Carbon-Carbon Composites Made with Hybrid (Carbon Fiber-Carbon Nanomaterials) as Reinforcement

Prof. Lalit Mohan Manocha¹, Satish Manocha¹, R. Pande¹, Vishal Mankadia¹ (¹Sardar Patel Univ., India) 131

18B-am-02 10:20 – 10:40

Development of Ti-doped 3D Carbon/Carbon Composites

Alba Centeno Pérez¹, C. Blanco¹, R. Santamaría¹, M. Granda¹, R. Menéndez¹ (¹Instituto Nacional del Carbón, Spain) 131

18B-am-03 10:40 – 11:00

Thermal Conductivity Measurements for Carbon Fibers
Amod A Ogale¹, Rebecca Alway-Cooper¹, Merlin Theodore², David Anderson³ (¹Clemson Univ., USA) (²UTC, USA) (³UDRI, USA) 132

18B-am-04 11:00 – 11:20

In situ Synthesis of Carbon Nanotubes within Carbon Fibre Cloth

Bojan O. Boskovic¹, Toby Hutton¹ (¹Dunlop Aerospace Braking Systems, UK) 132

18B-am-05 11:20 – 11:40

The Influence of Transport Modes on Numerical Analysis of Chemical Vapor Infiltration for Synthesis of C/C Composites

Aijun Li¹, Olaf Deutschmann¹, (¹Univ. of Karlsruhe, Germany) 133

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CARBON 2008 Conference Program Oral

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18AM2 (ORAL SESSION 11)

Session C

Metropolitan Room Shiga

CHARACTERIZATION

Chairs: Dr. J. M. D. Tascon (Instituto Nacional del Carbon, Spain)

Dr. Y. Hanzawa (Chiba Univ. Tech., Japan)

18C-am-01 9:50 – 10:20 INVITED LECTURE

The World of Dislocations in Graphite

Prof. Malcolm I. Heggie¹ Irene Suarez-Martinez², Gemma Haffenden¹, Calvin Davidson¹ (¹Univ. Sussex, UK) (²IMN Nantes, France) 133

18C-am-02 10:20 – 10:40

Variations of Electrical Resistance and Thermal Diffusivity of Carbon Blocks during Graphitization

Norio Iwashita (National Institute of Advanced Industrial Science and Technology (AIST), Japan) 134

18C-am-03 10:40 – 11:00

Application of Coconut Shell Activated Carbon Containing Additives for Electrical Grounding System

Nabihah Binti Hashim¹, Mohamad Deraman², Ahmadun Nijar Zainal Abidin¹, Annuar Ramli¹, Fakhrolrazi Mahtar¹, Wan Razli Wan Abdullah¹, Mohd Norfallah Md Isa¹ (¹Telekom Malaysian Research and Development, Malaysia) (²Universiti Kebangsaan, Malaysia) 134

18C-am-04 11:00 – 11:20

A Refined Method of Porous Structure Analysis of Activated Carbons with N₂ Adsorption Isotherms

Eugene A. Ustinov¹, Julia Kukushkina¹, Vasiliy Sokolov¹, Alexander Kravchik¹, Gennady Tereshchenko¹, Maxim Melgunov², Peter Eletski², Vadim Yakovlev², Vladimir Fenelonov² (¹Ioffe Physicotechnical Institute, Russia) (²Boreskov Institute of Catalysis, Russia) 135

18C-am-05 11:20 – 11:40

Sulfuric Acid Intercalation of Wood Charcoals Heat-Treated at Various Temperatures

Yukie Saito¹, Kodai Kuwata¹, Satoshi Shida¹, Masamitsu Ohta¹ (¹The Univ. of Tokyo, Japan) 135

18C-am-06 11:40 – 12:00

Effect of Inorganics on Porosity Development of Activated Carbons Produced from Biomass

Esin A. Varol¹, Ersan Pütün¹, Ayşe Pütün¹ (¹Anadolu Univ., Turkey) 136

12:10 – 12:30 Closing Address Metropolitan Asama B, C

Session D

Sunroute Room Hiten

ENVIRONMENT AND ENERGY

Chairs: Dr. F. S. Baker (Oak Ridge National Laboratory, USA)

Dr. Jun Maruyama (Osaka MTRI, Japan)

18D-am-01 9:50 – 10:20 FEATURED LECTURE

Novel Hybrid Adsorbents with Dual Functions of High Adsorptive and Photocatalytic Activities

Prof. Chong R. Park¹, Hyeon Gu Cho¹, Chang Hun Yun², Ji Hyuk Im¹ (¹Seoul National Univ., Korea) (²Engineering Plastics R&D, LG Chem. Ltd., Korea) 136

18D-am-02 10:20 – 10:40

Palladium-doped Nanoporous Carbon Fibers for Hydrogen Storage

Nidia C. Gallego¹, Cristian I. Contescu¹, Vinay V. Bhat¹, Halil Tekinalp², Dan D. Edie² (¹Oak Ridge National Laboratory, USA) (²Clemson Univ., USA) 137

18D-am-03 10:40 – 11:00

Carbon-Supported Metallic Catalysts for the Improvement of MgH₂ Decomposition Kinetics

Maria Angeles Lillo-Rodenas¹, Z. Xiao Guo², K. François Aguey-Zinsou², Diego Cazorla-Amoros¹, Angel Linares-Solano¹ (¹Univ. of Alicante, Spain) (²Univ. College London, UK) 137

18D-am-04 11:00 – 11:20

Ni/Pd Nanoparticles Supported on Carbon as Catalysts for MgH₂ Decomposition

Diego Cazorla-Amoros¹, Sonia Dominguez-Dominguez¹, Maria Angeles Lillo-Rodenas¹, Angel Berenguer-Murcia¹, Joseph Calo² (¹Univ. of Alicante, Spain) (²Brown Univ., USA) 138

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Hydrogenation Properties of Hydride-Containing Carbon Materials

Cathie Vix-Guterl¹, Renato Campesi¹, Fermin Cuevas¹, E. Leroy¹, Mickael Hirscher², Stephen Knopf¹, Roger Gadiou¹, Cathie Vix-Guterl, Michel Latroche (¹ISIC/CNRS, France) (²MPI-MF, Germany) 138

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Preparation of Novel Platinum-Supported Carbon Catalysts from Ion Exchange Resin and Its Application to the Combustion of Toluene

Kouichi Miura¹, Satoshi Ido¹, Hiroyuki Nakagawa¹ (¹Kyoto Univ., Japan) 139

12:10 – 12:30 Closing Address Metropolitan Asama B, C