Special Lecture 25 min (Presentation) + 5 min (Discussion)
General Lecture 10 min (Presentation) + 5 min (Discussion)
1 min (Presentation)

#### General Lectures (9:30-10:45) Properties of Nanotubes

- 1-1 The mechanism and ability of SW/DWCNT adsorbing radioactive elements in the environment OTakumi Araki, Syogo Tejima, Hisashi Nakamura, Bunshi Fugetsu, Morinobu Endo
- 1-2 Photoluminescence from dried hybrids of double-stranded DNA and single-walled carbon nanotubes OMasahiro Ito, Yusuke Ito, Tomoki Kobayashi, Takuya Hayashida, Daisuke Nii, Kazuo Umemura, Yoshikazu Homma
- 1-3 Raman study on X-ray induced defect and its structure in carbon nanotube
  OToshiya Murakami, Yuki Yamamoto, Mitsuaki Matsuda, Kenji Kisoda, Chihiro Itoh
- 1-4 Photoluminescence Nonlinearity of Hole-doped Single-walled Carbon Nanotubes ONaoto Akizuki, Shinichiro Mouri, Yuhei Miyauchi, Kazunari Matsuda
- 1-5 Thermopower in Highly Purified Semiconducting Single-Wall Carbon Nanotube Buckypaper
  OYusuke NAKAI, Kazuya HONDA, Yasumitsu MIYATA, Kazuhiro YANAGI, Yutaka MANIWA

#### **Special Lecture (11:00-11:30)**

**1S-1** Flexible and stretchable carbon nanotube thin-film transistors and integrated circuits Yutaka Ohno

# **General Lectures** (11:30-12:15) **Application of Nanotubes**

- 1-6 Diameter-Dependent Threshold Voltages of Carbon Nanotube Thin-Film Transistors OFumiyuki Nihey, Yuta Kikuchi, Fusako Sasaki, Kazuki Ihara, Hideaki Numata, Yuki Kuwahara, Shigekazu Ohmori, Takeshi Saito
- 1-7 Development of compounded foil of carbon nanotube and sputter-deposition carbon OHiroo Hasebe, Hironori Kuboki, Hiroki Okuno, Isao Yamane, Hiroshi Imao, Nobuhisa Fukunishi, Masayuki Kase, Osamu Kamigaito
- 1-8 Immunoassay with Single-Walled Carbon Nanotubes as Near-Infrared Fluorescent Labels OYoko Iizumi, Toshiya Okazaki, Yuzuru Ikehara, Mutsuo Ogura, Masako Yudasaka

#### **General Lectures (13:30-14:30)**

#### Applications of Nanotubes, Endohedral Nanotubes

Highly Conductive CNT/Polymer Composite on Arbitrary Rubber Matrices Based on Thermodynamics
 OSeisuke Ata, Howon Yoon, Chandramouli Subramaniam, Takaaki Mizuno, Takeo Yamada, Kenji Hata

- 1-10 Thermally conductive SG-CNT-Cu composite with low thermal expansion
  OYuzuri Yasuda, Chandramouli Subramaniam, Seisuke Ata, Motoo Yumura, Takeo Yamada,
  Don N. Futaba, Kenji Hata
- 1-11 Metallization of 1D sulfur crystals inside carbon nanotubes OToshihiko Fujimori, Aaron Morelos-Gomez, Zhen Zhu, Hiroyuki Muramatsu, Ryusuke Futamura, Koki Urita, Mauricio Terrones, Takuya Hayashi, Morinobu Endo, David Tomanek, Katsumi Kaneko
- 1-12 Structure and electronic properties of  $\pi$ -conjugated polymers formed in carbon nanotubes OKenshi Miyaura, Yasumitsu Miyata, Ryo Kitaura, Hisanori Shinohara

☆☆☆☆☆ Coffee Break (14:30-14:45) ☆☆☆☆☆

#### **Special Lecture (14:45-15:15)**

1S-2 Symmetric carbon nanostructures produced from organometallic compounds Hidetsugu Shiozawa

#### **General Lectures** (15:15-16:15)

# Nanohorn, Carbon Nanoparticles, Environmental/Safety Characterization of Nanomaterials and the Others

- 1-13 Effect of functional groups on encapsulation of functionalized C<sub>60</sub> molecules inside carbon nanohorns OKeita Kobayashi, Hiroshi Ueno, Ken Kokubo, Hidehiro Yasuda
- 1-14 Photoinduced Reaction of Polyyne Derivatives and Iodine Molecules in Solution OYoriko Wada, Tomonari Wakabayashi
- 1-15 Lysosomal membrane permeabilization induced by carbon nanohorns caused reactive oxygen species generation and apoptosis in RAW264.7 cell
  OMei Yang, Minfang Zhang, Yoshio Tahara, Sumio Iijima, Masako Yudasaka
- 1-16 Development of Ion Mobility Measurement System
  OToshiki Sugai, Yasuhiro Hiroshiba, Ninako Mikami

Poster Preview (16:15-17:00) Poster Session (17:00-18:30)

★: Candidates for the Young Scientist Poster Award

#### **Formation and Purification of Nanotubes**

- 1P-1 Bottom-up synthesis and structures of  $\pi$ -lengthened finite single-wall carbon nanotube molecules
- ★ OMatsuno Taisuke, Kamata Sho, Hitosugi Shunpei, Isobe Hiroyuki
- 1P-2 Initiation of carbon nanotube growth by well-defined carbon nanorings
- ★ OYasutomo Segawa, Haruka Omachi, Takuya Nakayama, Eri Takahashi, Kenichiro Itami
- 1P-3 Post-annealing effect on single-wall carbon annotubes prepared by PG-ACCVD technique Ito Yosuke, OSuzuki Shinzo, Nagasawa Hiroshi, Ono Akira, Achiba Yohji
- 1P-4 String-like Assembly of Aligned Single-Wall Carbon Nanotubes in a Single-Chiral State
  Hideki Kawai, OKai Hasegawa, Toru Nakatsu, Yasuhisa Naitou, Yuki Takagi, Yoshihumi Wada,
  Taishi Takenobu, Kazuhiro Yanagi

1P-5	Elucidation of the Chirality Control of Single-Walled Carbon Nanotube by Irradiating Free Electron Laser during Growth  OKeisuke Yoshida	
1P-6	SWCNT adsorption onto hydrogels is affected by solute and pH value OAtsushi Hirano, Yasuko Urabe, Hiromichi Kataura, Takeshi Tanaka	
1P-7	Effect of Catalytic Elements to the Growth of Nano-Carbon Composite Films OYuki Matsuoka, Masamichi Yoshimura	
1P-8	Fabrication of in-plane Aligned and Semiconducting as-grown Single-Walled Carbon Nanotubes ONobuyuki Iwata, Takumi Sagara, Yusaku Tsuda, Keisuke Yoshida, Koji Ishii, Hirofumi Yajima, Hiroshi Yamamoto	
1P-9 ★	Enrichment of 1.1 nm-diameter single-wall carbon nanotubes by high-temperature gel filtration ORyota Ichimura, Yasumitsu Miyata, Yusuke Nakai, Kazuhiro Yanagi, Yutaka Maniwa	
1P-10	Low-temperature single-walled carbon nanotubes synthesis from Pt catalysts in the alcohol gas source method and its growth mechanism  OHiroki Kondo, Ranajit Ghosh, Shigeya Naritsuka, Takahiro Maruyama, Sumio Iijima	
1P-11	Purification of Single-Walled Carbon Nanotubes by Applying Photochemical Reaction of an Ionic Organic Molecule  OYoko Matsuzawa, Yuko Takada, Tetsuya Kodaira, Hideyuki Kihara, Masaru Yoshida	
1P-12	"Frost column like CNTs" growth by thin Ni catalyst films OYuji Kusumoto, Kazuki Sekiya, Hirofumi Koji, Hiroshi Furuta, Akimitsu Hatta	
1P-13	Diameter Distribution of Single-Walled Carbon Nanotubes from Nanodiamond Particles as the Catalysts for CVD Growth  OTakanori Umino, Taiki Inoue, Shohei Chiashi, Yoshikazu Homma, Shigeo Maruyama	
1P-14	Improved efficiency in metal-free carbon nanotube growth from nanodiamonds by switching growth driving force OHiraaki Kokame, Kazuki Fujimoto, Ryota Negishi, Tatsuji Arifuku, Noriko Kiyoyanagi, Yoshihiro Kobayashi	
1P-15	Molecular Dynamics Simulation of SWNT Growth and DFT Calculation of the Chemical Reaction of Ethanol and Cobalt Clusters  OKaoru Hisama	
1P-16 ★	Chirality Analysis of Horizontally Aligned Single-Walled Carbon Nanotubes by Raman Spectroscopy OTaiki Inoue, Daisuke Hasegawa, Shohei Chiashi, Shigeo Maruyama	
1P-17	Growth kinetics of narrow-chirality distributed single-walled carbon nanotube under pulse plasma CVD OBin Xu	
Properties of Nanotubes		

- 1P-18 Optical properties of vertically aligned CNT forests formed at various growth temperature OHiroshi Furuta, Kazuki Sekiya, Keisuke Takano, Masanori Hangyo, Akimitsu Hatta
- 1P-20 Coherent phonon spectroscopy of semiconducting single-wall carbon nanotubes OYuki Honda, Elizabeth Maret, Atsushi Hirano, Takeshi Tanaka, Kotaro Makino, Muneaki Hase

- **1P-21** Interplay of wall number and diameter on the electrical conductivity of carbon nanotube thin films OGuohai Chen, Don Futaba, Shunsuke Sakurai, Motoo Yumura, Kenji Hata
- 1P-22 Effect of lattice vibration on the geometry of carbon nanotubes OTakashi Koretsune, Koichiro Kato, Susumu Saito
- **1P-23** Temperature Dependence of Stokes and anti-Stokes photoluminescence from oxygen-doped carbon nanotubes

OYuhei Miyauchi, Naoto Akizuki, Munechiyo Iwamura, Shinichiro Mouri, Kazunari Matsuda

#### **Applications of Nanotubes**

- 1P-24 Highly Sensitive Detection of Oxygen Gas by Perovskite Materials Decorated Single-Walled Carbon
- ★ Nanotubes

OFukuda Hiroshi

- 1P-25 Gas Sensing using Semiconducting Single-Walled Carbon Nanotubes Thin Film OSuzuki Yuto
- 1P-26 Interaction between Carbon Nanotubes and Neurons Studied With High-Density Microelectrode
  ★ Arrays

OFlorent Seichepine, Kosmas Deligkaris, Urs Frey

- 1P-27 Oxygen Reduction Reaction of Nitrogen-doped Graphitic Structure Using Single-walled Carbon Nanotubes as a Catalyst Support
  Junich Morita, OTsuyohiko Fujigaya, Naotoshi Nakashima
- 1P-28 Air-Stable High-Efficiency Nanotube-Si Heterojunction Solar Cells

★ OKehang Cui

- **1P-29** Influence of dispersion state of long SWCNTs on the electrical conductivity of composites
- ★ OHowon Yoon, Seisuke Ata, Takeo Yamada, Motoo Yumura, Kenji Hata

#### **Applications of Fullerenes**

- 1P-30 Fabrication and characterization of inverted-type organic thin-film solar cells using [60]fullerene-diamine assembly films

  OBanya Shoto, Matsumoto Taisuke, Oku Takeo, Akiyama Tsuyoshi
- 1P-31 Synthesis and evaluation of spiro-acetalized [60]fullerene toward organic photovoltaic devices OMasuda Hiroyuki, Kokubo Ken, Ikuma Naohiko, Tsubasa Mikie, Saeki Akinori, Seki Shu, Oshima Takumi
- 1P-32 Preparation and microscopic analysis of fullerene-diamine adducts as organic electronic material OYuji Ono, Tsuyoshi Akiyama, Takeo Oku
- 1P-33 The electrical transport properties of photo-polymerization of C<sub>60</sub> thin film using focused optical vortex OWataru Akiyama, Daiki Momiyama, Naoto Toriumi, Katsuhiko Miyamoto, Takashige Omatsu, Jonathan Bird, Yuichi Ochiai, Nobuyuki Aoki
- 1P-34 Efficiency improvement of PTB7:PC71BM organic solar cells by inserting LiF cathode buffer layer OShunjiro Fujii, Tatsuki Yanagidate, Masaya Ohzeki, Yuichiro Yanagi, Yuki Arai, Takanori Okukawa, Akira Yoshida, Takeshi Tanaka, Yasushiro Nishioka, Hiromichi Kataura
- 1P-35 Energetics and Electronic Structure of C<sub>60</sub> doped Bulk Si OOkada Susumu

- 1P-36 Synthesis and Characterization of Fullerene Derivatives with a Thiophene Moiety in Organic Photovoltaic Devices
  OTatsuya Hayashi, Jaebuem Oh, Haeseong Lee, JongJun Ann, HeeJae Lee, Jin Jang, Chyongjin Pac, Hiroshi Moriyama
- 1P-37 Structural Effect of Fullerene Derivatives with a Cyano Group in Organic Photovoltaic Devices
  OKana Matsumoto, Jaebuem Oh, Haeseong Lee, JongJun Ann, HeeJee Lee, Jin Jang, Chyongjin Pac,
  Hiroshi Moriyama

Plenary Lecture
Special Lecture
General Lecture by Candidate for

40 min (Presentation) + 5 min (Discussion)
25 min (Presentation) + 5 min (Discussion)
10 min (Presentation) + 10 min (Discussion)

Osawa Award and Iijima Award

General Lecture 10 min (Presentation) + 5 min (Discussion)

**Poster Preview** 1 min (Presentation)

#### General Lectures by Candidates for Osawa Award (9:00-9:40)

2-1 Enhanced photoelectrochemical performance of composite photovoltaic cells of Li<sup>+</sup>@C<sub>60</sub>/sulfonated porphyrin supramolecular nanoclusters

OKei Ohkubo, Yuki Kawashima, Hayato Sakai, Taku Hasobe, Shunichi Fukuzumi

2-2 Surface functionalization of nanodiamonds towards high solubility in physiological media and practical biomedical applications

OZhao Li, Chen Xiao, Chano Tokuhiro, Komatsu Naoki

#### General Lectures by Candidates for Iijima Award (9:40-10:40)

- 2-3 Carbon Nanotubes Growth via Twisted Graphene Nanoribbons OHong En Lim, Yasumitsu Miyata, Ryo Kitaura, Yoshifumi Nishimura, Yoshio Nishimoto, Stephan Irle, Jamie H. Warner, Hiromichi Kataura, Hisanori Shinohara
- 2-4 Highly Durable Polymer Electrolyte Fuel Cell Electrocatalyst Based on Carbon Nanotube OTsuyohiko Fujigaya, Naotoshi Nakashima
- 2-5 Stabilities and Electronic Structures of Carbon Impurities in Hexagonal Boron-Nitride Monolayers and Bilayers
  - OYoshitaka Fujimoto, Takashi Koretsune, Susumu Saito

☆☆☆☆☆ Coffee Break (10:45-11:00) ☆☆☆☆☆

#### **Special Lecture (11:00-11:30)**

2S-3 Graphene based optoelectronics in the visible spectra Coskun Kocabas

## **General Lectures (11:30-12:15)**

#### Formation and Applications of Graphene

- 2-6 Effect of High Pressure Pre-Annealing on Graphene Growth on Copper by Chemical Vapor Deposition OSeiya Suzuki, Takashi Nagamori, Yuki Matsuoka, Masamichi Yoshimura
- 2-7 Electronic structure of potassium doped MoS<sub>2</sub>
  ONguyen Thanh Cuong, Minoru Otani, Susumu Okada
- 2-8 Highly Conductive NGP/Epoxy Composites OAfshin J. Ebrahimi, Suzuki Shingo, Sawatani Seiichi, Ueno Masataka, Miyamoto Norihiko, Iida Masayasu

☆☆☆☆☆ Lunch (12:15-13:30) ☆☆☆☆☆

### Young Scientist Poster Award Ceremony (13:30-13:45) General Meeting (13:45-14:15)

#### Plenary Lecture (14:15-15:00)

2S-4 Separation of Single-Wall Carbon Nanotubes using Gel Column Chromatography Hiromichi Kataura

#### **General Lectures** (15:00-15:45)

#### **Endohedral Metallofullerenes**

- Ultraviolet Photoelectron spectra of Sc<sub>3</sub>C<sub>2</sub>@C<sub>80</sub>
   OTakafumi Miyazaki, Sousuke Ookita, Takeyuki Zaima, Tatsuhiko Nishi, Haruya Okimoto, Noriko Izumi, Yuusuke Nakanishi, Hajime Yagi, Hisanori Shinohara, Shojun Hino
- 2-10 Electrochemical synthesis of Li<sup>+</sup>@C<sub>60</sub>• based on the high ionic conductivity of [Li<sup>+</sup>@C<sub>60</sub>](PF6<sup>-</sup>) in aromatic solvent
   OHiroshi Ueno, Ken Kokubo, Kei Ohkubo, Naohiko Ikuma, Hiroshi Moriyama, Shunichi Fukuzumi, Takumi Oshima
- 2-11 Chemical Modifications of Lithium-Ion-Encapsulated [60] fullerene [Li $^+$ @C $_{60}$ (CpH)]PF $_6$  and [Li $^+$ @C $_{60}$ (CPh $_2$ )]PF $_6$  OHiroki Kawakami, Hiroshi Okada, Yutaka Matsuo

Poster Preview (16:00-16:45) Poster Session (16:45-18:15)

★: Candidates for the Young Scientist Poster Award

#### **Formation of Graphene**

- **2P-1** Controlling the number of layers of graphene by binary metal catalyst
- ★ OTakesaki Yuichiro
- 2P-2 Direct Growth of Graphene on Insulating Substrates by Annealing of Amorphous Carbon
- ★ OYohei Hasebe, Hitoshi Nakahara, Koji Asaka, Yahachi Saito
- 2P-3 Shape-controlled synthesis of graphene and h-BN heterostructures OEriko Maeda, Yasumitsu Miyata, Ryo Kitaura, Hisanori Shinohara
- 2P-4 Decreasing growth rate of graphene layers on graphene nanoribbons OHaruki Kitakawa, Ryota Negishi, Hirofumi Tanaka, Minoru Fukumori, Takuji Ogawa, Yoshihiro Kobayashi
- **2P-5** Growth mechanism for graphene and graphene nanoribbon under rapid-heating plasma CVD OHiroo Suzuki, Toshiaki Kato, Toshiro Kaneko
- **2P-6** The effect of adding N-containing compounds on the eDIPS-CVD synthesis of SWCNTs OShigekazu Ohmori, Masaharu Kiyomiya, Takayoshi Hirai, Yuki Kuwahara, Takeshi Saito

#### Nanohorn

- 2P-7 Preparation and structural properties BN-doped carbon nanohorn aggregates ORyota Yuge, Takashi Manako, Shunji Bandow, Masako Yudasaka, Kiyohiko Toyama, Takashi Yamaguchi, Kentaro Nakahara
- 2P-8 Dynamic whole-body imaging of radiolabelled carbon nanohorns in mice OMinfang Zhang, Dhifaf Jasim, Antonio Nunes, Cécilia Ménard-Moyon, Alberto Bianco, Sumio Iijima, Masako Yudasaka, Kostas Kostarelos
- 2P-9 Electrical resistance measurement of single carbon nanocoil ORyuji Kunimoto, Taiichiro Yonemura, Yoshiyuki Suda, Hideto Tanoue, Hirofumi Takikawa, Hitoshi Ue, Kazuki Shimizu, Yoshito Umeda
- 2P-10 Efficient synthesis of fullerenes in multi-phase ac arc plasma
  OHiroshi Sano, Ryoji Nakaya, Norio Maki, Masaaki Ashihara, Hiroyuki Magara, Mikihiro Ueno, Masanori Takeuchi, Eiji Saji

#### **Properties of Nanotubes**

- 2P-11 Direct CVD Synthesis of Suspended Double-walled Carbon Nanotubes and Their Characterization by
   ★ TEM and Optical Spectroscopy
   OSihan Zhao, Tomoya Kitagawa, Yuhei Miyauchi, Kazunari Matsuda, Hisanori Shinohara, Ryo
  - OSihan Zhao, Tomoya Kitagawa, Yuhei Miyauchi, Kazunari Matsuda, Hisanori Shinohara, Ryo Kitaura
- 2P-12 Evaluation method of reliable specific strength of ultra-light MWCNT fiber based on uncertainty
- ★ OHikaru Nishizaka, Yoshinori Sato, Kenichi Motomiya, Kazuyuki Tohji
- **2P-13** Gas adsorption properties of gel-immobilized ultrathin carbon nanotubes
- ★ OEri Inukai, Yasumitsu Miyata, Ryo Kitaura, Hisanori Shinohara
- 2P-14 Coulomb Blockade Effect at Quantum Dots Formed in SWNTs Network FET Studied via Scanning

  ★ Gate Microscopy

  OMasahiro Matsunaga, Xiaojun Wei, Kenji Maeda, Tatsurou Yahagi, Jonathan P. Bird, Koji Ishibashi, Yuichi Ochiai, Nobuyuki Aoki
- 2P-15 Mechanistic Studies on the Helicity-Selective Photoreaction of Single-Walled Carbon Nanotubes with Organosulfur Compounds in the Presence of Oxygen
  OYuri Amagai, Yutaka Maeda, Kei Ohkubo, Shunichi Fukuzumi, Michio Yamada, Tadashi Hasegawa, Takeshi Akasaka
- **2P-16** Thermal annealing effect of X-ray irradiation defect in carbon nanotube OMitsuaki Matsuda, Yuki Yamamoto, Toshiya Murakami, Kenji Kisoda, Chihiro Itoh
- 2P-17 Electric and electronic properties of CNT/n-type 4H-SiC interface formed by surface decomposition of SiC
   OTakatoshi Yajima, Toyokazu Nomoto, Takahiro Maruyama
- 2P-18 Precise Probing of Local Thermal Elevation of Metal Nanostructure during Laser Illumination Utilizing Surface-enhanced Raman Scattering from a Single-Walled Carbon Nanotube OSatoshi Yasuda, Hideki Nabika, Mai Takase, Shinji Hoshina, Masanobu Nara, Ryukou Shito
- 2P-19 UV, X-ray and e-beam irradiation effects of IR absorption bands in single-walled carbon nanotubes OMasao Ichida, Yasumitsu Miyata, Chihiro Ito, Toshiya Murakami, Yuka Ikemoto, Akira Kawakami, Kazuhiro Yanagi, Hiromichi Kataura, Hiroaki Ando

2P-20 ★	Charge transfer between polyxoxmetalates and SWNTs by means of photoluminescence spectroscopy OLiu Hong, Naotoshi Nakashima
Chemis	stry of Fullerenes
2P-21 ★	Determination of Hyperfine Coupling Constants of Cycloparaphenylene Cation Radical OTakahiko Koyama, Eiichi Kayahara, Shigeru Yamago, Tatsuhisa Kato
2P-22	Photoinduced Charge Separation in Supramolecules between Li+ $@C_{60}$ and Chlorins OYuki Kawashima, Kei Ohkubo, Shunichi Fukuzumi
2P-23	A trend in the hyperfine constant for the series of N@Cn endofullerenes OTomonari Wakabayashi, Tatsuya Kanemoto, Ryuki Imamura
2P-24	Synthesis, structure, and properties of a highly soluble fullerene-pentacene adduct OTakuya Nishihama
2P-25 ★	Solid-State Reaction of H2O@C <sub>60</sub> and X-Ray Structure of the [2+2] Dimer ORui Zhang, Michihisa Murata, Atsushi Wakamiya, Yasujiro Murata
2P-26	Photoinduced electron transfer in a porous organic salt composed of 9-(4-sulfophenyl)anthracene and triphenylmethylamine and fullerene.  OTetsuya Hasegawa, Kei Ohkubo, Norimitsu Tohnai, Ichiro Hisaki, Mikiji Miyata, Shunichi Fukuzumi
2P-27	Evaluation of Thermal Stability of Nanocomposite Polymers with Multiarylated Fullerenes ORyo Takahashi, Ken Kokubo, Akio Harada, Naohiko Ikuma, Takumi Oshima
2P-28	C <sub>60</sub> regeneration by oxidative deamination of azafulleroids with peracids and substituent effects of azafulleroids OKoichi Fujioka, Naohiko Ikuma, Yusuke Misawa, Ken Kokubo, Takumi Oshima
2P-29	Activation Energies of C <sub>2</sub> Elimination from C <sub>62</sub> Isomers ODai Nagashima, Tohru Sato, Kazuyoshi Tanaka
2P-30	One-pot Synthesis of Periconjugated Fullerotriazolium and its Aggregation Behavior ONaohiko Ikuma, Saori Inaba, Ken Kokubo, Takumi Oshima
2P-31	Synthesis and Properties of 1-Aryl-4-(N-alkylamino)fullerenes OTsubasa Mikie, Akinori Saeki, Naohiko Ikuma, Ken Kokubo, Takumi Oshima, Shu Seki
2P-32	Thermal Silylation Reactions of C <sub>60</sub> Using Three-membered Ring Organosilicon Compounds ODaiki Inaba, Ryosuke Iida, Masahiro Kako, Tadashi Hasegawa, Yutaka Maeda, Michio Yamada, Takeshi Akasaka
Endoh	edral Metallofullerene
2P-33	The density functional theory calculations of $Sc_2C2@C_{82}$ OYuma Seino, Takahiro Hinoishi, Hajime Yagi, Takafumi Miyazaki, Shojun Hino
2P-34	Photoelectron spectroscopy of $Er_3N@C_{80}$ O Takahiro Hinoishi
2P-35 ★	Definite molecular structures of $M@C_{2\nu}(9)$ - $C_{82}$ (M = Sc, Y, and Ce) OMitsuaki Suzuki, Zdenek Slanina, Naomi Mizorogi, Xing Lu, Michio Yamada, Yutaka Maeda, Tadashi Hasegawa, Shigeru Nagase, Marilyn Olmstead, Alan Balch, Takeshi Akasaka

- $\begin{array}{c} \textbf{2P-36} & \text{Synthesis of new } [\text{Li}^+ @ \text{C}_{60}] \text{ salts for improved solubility} \\ & \text{OHiroshi Okada, Yutaka Matsuo} \end{array}$
- **2P-37** Solid State Lithium NMR Studies on Complexes Composed of Lithium and C<sub>60</sub> Fullerene OTomoaki Endo

Special Lecture 25 min (Presentation) + 5 min (Discussion)
General Lecture 10 min (Presentation) + 5 min (Discussion)
1 min (Presentation)

#### Special Lecture (9:00-9:30)

3S-5 Low-energy electron microscopy study of graphene growth Hiroki Hibino

#### General Lectures (9:30-10:15) Properties of Graphene

- 3-1 Tuning the Chemical Reactivity of Graphene by Mechanical Strain
  OMark Bissett, Satoru Konabe, Susumu Okada, Masaharu Tsuji, Hiroki Ago
- **3-2** Stabilities and Electronic Properties of Silicene- and Graphene-based Composite Materials OSusumu Saito, Takashi Koretsune
- 3-3 Valley Dependence of Exciton Many-Body Effects in Monolayer Transition-Metal Dichalcogenides OSatoru Konabe, Susumu Okada

#### **Special Lecture (10:15-10:45)**

**3S-6** Growth of highly-integrated graphene nanoribbon toward high performance device applications Toshiaki Kato

☆☆☆☆☆ Coffee Break (10:45-11:00) ☆☆☆☆☆

#### **Special Lecture** (11:00-11:30)

**3S-7** Ultrahigh-density data storage using C<sub>60</sub> molecules Masato Nakaya

#### General Lectures (11:30-12:30) Chemistry and Applications of Fullerenes

- 3-4 Morphology control and solid state properties of fullerenol nanosheets and nano crystals OYoshiaki Sano, Keisuke Baba, Hironori Ogata
- Selective Synthesis of Novel Octaalkoxyfullerenes  $C_{60}(OR)_8$  and Octaarylfullerene  $C_{60}(4-MeOC_6H_4)_8$  by a Substitution Reaction of Octabromofullerene  $C_{60}Br_8$  OKouya Uchiyama, Hiroshi Moriyama, Kenji Yoza
- Selective Synthesis of Fullerenols and their Derivatives;  $C_{60}(OH)_5X$  and  $C_{60}(OSiMe_3)_5X$  (X = Cl, Br)

  OMiki Igarashi, Shouhei Yamamoto, Hiroshi Ueno, Kenji Yoza, Hiroshi Moriyama
- 3-7 Crystal Structure and Dielectric Property of H<sub>2</sub>O@C<sub>60</sub>
   OShinobu Aoyagi, Norihisa Hoshino, Tomoyuki Akutagawa, Ryo Kitaura, Hisanori Shinohara, Kunihisa Sugimoto, Rui Zhang, Yasujiro Murata

☆☆☆☆☆ Lunch (12:30-13:45) ☆☆☆☆☆

#### **Special Lecture (13:45-14:15)**

**3S-8** Preparation, size-separation and biomedical application of water-soluble nanocarbons Naoki Komatsu

#### **General Lectures** (14:15-15:00)

#### Formation and Purification of Nanotubes

- **3-8** Why is (6,5) nanotube so special in the tube growth processes? Experimental and theoretical considerations-
  - OYohji Achiba, Takeshi Kodama, Kenro Hashimoto, Haruo Shiromaru, Toshiya Okazaki
- **3-9** Bis(tert-butylpyrene) nanotweezers and nanocalipers: Enhanced extraction and recognition abilities for single-walled carbon nanotubes
  - OGang Liu, A. F. M. Mustafizur Rahman, Takahide Kimura, Naoki Komatsu
- **3-10** The Infinite Possible Growth Ambients that Support Single-Wall Carbon Nanotube Forest Growth OHiroe Kimura

☆☆☆☆☆ Coffee Break (15:00-15:15) ☆☆☆☆☆

#### Poster Preview (15:15-16:00) Poster Session (16:00-17:30)

#### **Applications of Graphene**

- 3P-1 Preparation and Properties of Surface Modified Graphene Oxide by Grafting of Polymers OTetsuo Sumiyoshi, Kazuhiro Nagata, Yusuke Yagi, Kazuhiro Fujiki, Norio Tsubokawa
- 3P-2 Hybrid Graphene Titanium Surface for Sensing Applications OKakimi Yousuke, Rius Gemma, Eryu Osamu
- 3P-3 Substrate effects on chemical doping of graphene in tris buffer Katsuya Masuda, OMasahito Sano
- 3P-4 Anomalous behavior of Raman signals from carbon nanotube-graphene hybrid structures OTaro Kusumoto, Hiraaki Kokame, Ryota Negishi, Yoshihiro Kobayashi
- 3P-5 Synthesis and characterization of Pt-Ru nanoparticles on carbon nanosheets by one-step electrodeposition
  OHayase Shohei
- 3P-6 Suppressed mobility degradation in large-area graphene oxide films by alcohol vapor treatments OMichihiro Matsuzaki, Ryota Negishi, Yasuhide Ohno, Kenzo Maehashi, Kazuhiko Matsumoto, Yoshihiro Kobayashi
- **3P-7** Water-Soluble Graphene through Polyglycerol Grafting
- ★ OToku Yasuda, Li Zhao, Gang Liu, Syuji Aonuma, Takahide Kimura, Naoki Komatsu

#### **Properties of Graphene**

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