

テラヘルツナノ科学国際シンポジウム (TeraNano 2011) 国際テラヘルツ研究ネットワークワークショップ(GDR-I)

Key Words: THz Science, Carbon Nanotube, Graphene, Nanomaterials, THz devices, THz Application, etc

大阪大学中之島センター
2011年11月24日～29日

<http://www.ile.osaka-u.ac.jp/research/THP/TeraNano/>

第1回テラヘルツナノ科学国際シンポジウム(TeraNano 2011)ならびに第2回国際テラヘルツ研究ネットワークワークショップ(GDR-I)合同会議を、2011年11月24日より29日まで、大阪大学中之島センターで開催いたします。2005年には、テラヘルツ波、テラヘルツフォトニクス、テラヘルツエレクトロニクス分野融合による、新しいテラヘルツ科学技術分野の創製、2009年には、テラヘルツ応用分野開拓の現状と将来展望をコンセプトで開催して参りました。TeraNano2011はこれまでの分野に、テラヘルツナノ科学分野の創成をコンセプトに加えて、新しい切り口のテラヘルツ会議を開催いたします。会議では多くの招待講演に加えまして、欧米の学生も多く参加することか企画されております。若手育成や国際交流の場としても、貴重な機会を提供できるものと考えております。一般投稿論文(主にポスター)を最大で50件程度募集いたしますので、奮ってご投稿ください。登録・論文数に限りがありますので、お早めにご投稿・ご登録ください。

締め切り等

論文投稿期限 2011年9月15日、採択等通知 2011年10月1日、登録締め切り 2011年10月21日(最大120名)

主催・共催(2011年6月現在)

大阪大学レーザーエネルギー学研究センター、日本学術振興会先端研究拠点事業“ナノカーボンテラヘルツ科学”、米国国立科学財団PIREプログラム“TeraNano”、科学技術振興機構戦略的国際科学技術協力推進事業“WITH”、テラヘルツ電磁波産業利用研究会

仮プログラム

	24 th Nov.	25 th Nov.		26 th Nov.	27 th Nov.	28 th Nov.	29 th Nov.
AM	Plenary Introductory	THz science in Bio and Nano materials	Nanocarbon Growth Characterization	Lab Tour	Excursion	Electronics & Imaging	Applications
PM	Topical Lectures Poster I	THz sources and systems	Nanocarbon THz science and devices	on request		QCL& Devices Poster II	Industrial Applications
Night	Banquet Nano	Night session				Banquet GDR	

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Plenary Speaker : Sumio Iijima (Meijo Univ.)

Invited Speakers

Nano Science and Devices

Jonathan Bird (SUNY Buffalo), **Tobias Hertel** (Julius-Maximilians Univ. Würzburg), "Exciton Spectroscopy in Metallic and Semiconducting Carbon Nanotubes" **Kaz Hirakawa** (Univ. of Tokyo), **Christopher Stanton** (Univ. of Florida) "Coherent Phonons in Carbon Based Nanostructures" **Masashi Shiraishi** (Osaka Univ.), **Nobuyuki Aoki** (Chiba Univ.) "Selective Laser Irradiation for Fullerene-Based Green Electronics" **Kazuhisa Matsumoto** (Osaka Univ.) "Nano Carbon Devices and Application", **Riichiro Saito** (Tohoku Univ.) "Coherent Phonon Spectroscopy of Carbon Nanotubes"

Nano Carbon & THz

Taichi Otsuji (Tohoku Univ.) "Emission and Detection of Terahertz Radiation Using Two-Dimensional Electrons in III-V Semiconductors and Graphene", **Junichiro Kono** (Rive Univ.) "THz Dynamics in Carbon Nanotubes and Graphene", **Stephan Winnerl** (HZDR) "Relaxation Dynamics in Graphene at Energies Close to the Dirac Point", **Victor Ryzhii** (Aizu Univ.) "Mechanisms of Recombination and Carrier Heating and Cooling in Optically Pumped Graphene", **Sergey Ganichev**(Univ. of Regensburg) "Terahertz Radiation Induced Photon Helicity Driven Electric Currents in Graphene", **Yukio Kawano** (Tokyo Inst. Tech) "Highly Sensitive and Frequency-Tunable Terahertz Detection with Nano-carbon Devices", **Koichiro Tanaka**(Kyoto Univ.), **Dominique Coquillat**(CNRS-U. Montpellier 2) "Terahertz Radiation Rectification as a Probe of Universal Conductance Fluctuations in Graphene"

THz nanoscience

Frank Hegmann (Univ. of Alberta), **Masaya Nagai** (Osaka Univ.) "Large-Amplitude Vibrational Motion Driven by Intense THz Pulse", **Manfred Helm** (HZDR) "Terahertz Nonlinear and Coherent Effects in Semiconductor Nanostructures", **Noriaki Kida** (Univ. of Tokyo) "Terahertz Optics in Ferroelectrics", **Jean-Michel Menard** (Univ. of Regensburg), "Nonadiabatic switching of a photonic bandstructure via ultrastrong light-matter interactions"

THz bio/chemical science

Peter Jepsen (Tech Univ. Denmark), **Hitoshi Tabata** (Univ. of Tokyo) "Terahertz Surface Plasmonics for Bio-sensing", **Joo-Hiuk Son** (Univ. of Soul) "Principle and Applications of THz Molecular Imaging Using Nanoparticles", **Toshihiko Kiwa** (Oayama Univ.) "Application of Terahertz Chemical Microscope", **Chiko Otani** (Riken) "Terahertz Spectroscopy of Soft Materials", **Katsuhiko Ajito** (NTT) "THz Chemical Imaging for Pharmaceutical Applications"

THz system science

Yuri Avetisyan (Yerevan State Univ.) "THz-Wave Generation in Periodically Poled Lithium Niobate in Surface Emitting Geometry", **Hiroaki Minamide** (Riken) " High power THz emission and sensitive THz detection using nonlinear optical conversion", **Jean Louis Coutaz** (Univ. Savoie) "Accurate Characterization of Highly Absorbing Materials by Transmission and Reflection THz Time-Domain Spectroscopy", **Daniel Mittleman** (Rice Univ.)

THz imaging

Naoki Oda (NEC Guidance and Electro-Optics Division) "Proposal for Combined System of Real-Time THz Camera and Quantum Cascade Laser", **Tadao Nagatsuma** (Osaka Univ.) "Terahertz Imaging Using Broadband Noise Sources", **Erik Heinz** (IPHT) "Passive Submillimeter- Wave Stand-Off Video Camera for Security Applications", **Toshihiko Ouchi** (Canon) "Terahertz Tomography System Using Fiber Lasers and Its Applications"

THz devices, electronics & ICT

Wojciech Knap (Univ. Montpellier 2 &CNRS) "Terahertz Field Effect Transistoroscillators: From Plasma Wave HEMTs Emitters to Si-CMOS Detectors Arrays", **Jerzy Lusakowski** (Univ. of Warsaw) "THz Excitation of GaN/AlGaIn Structures", **Vyacheslav Popov** (RAS,Kotelnikov Inst. Radio Eng. Electron.) "Plasmonic Terahertz Detection by FET Arrays", **Masahiro Asada** (Tokyo Inst. Tech) "THz Oscillating Resonant Tunneling Diode and Its Basic Properties for Wireless Communication", Iwao Hosako (NiCT) "Technological prospects for ultrahigh-speed wireless communication", **Jae-Sung Rieh** (Korea Univ.) "Solid-State THz Electronics for Communication Systems", **Carlo Sirtori** (Univ. Paris 7) "Stabilization and Detection of THz Quantum Cascade Lasers Using an Optical Frequency Comb", **Jean Francois Lampin**(IEMN, Lille)" First experiments on MOSFET detection of UTC-PD radiation"

THz applications

Rene Beigang (Fraunhofer-Institute) "THz Applications with Photonic THz Sources: From Spectroscopy To Imaging", **Kodo Kawase** (Nagoya Univ.) "Nonlinear Optical Terahertz Generation and Sensing Applications", **Ken Wood** (QMC) "Recent Advances in Superconducting THz Detection Technology", Francesco Palma (NTT New Tera Technology) , **Hidetoshi Nakanishi** (Dainippon Screen) , **Toshikazu Mukai** (Rohm) , **Seizi Nishiazawa** (Aispec) " Terahertz Time-Domain Spectroscopy Applied to Nondestructive Evaluation of Pharmaceutical Products", **Tomofumi Ikari** (Spectra Design), **Naofumi Shimizu**(NTT)" Toxic gas detection in smoke with sub-terahertz waves"