

MS-2. Carbon-based nanomaterials, nanotubes, fullerenes, graphenes

10 September, 16:45 - 18:45 / 11 September, 16:30 - 18:30

MS-2-P-1483

Structural Analysis of Electron-Beam-Irradiated C60 Single Crystal Films Using High-Resolution Transmission Electron Microscopy and Electron Diffraction

Presenting author: **Masuda H.**

Authors: Masuda H., Yasuda H., Onoe J.

MS-2-P-1536

Mapping electronic states in Graphene

Presenting author: **Löffler S.**

Authors: Löffler S., Pardini L., Hambach R., Kaiser U., Schattschneider P., Draxl C.

MS-2-P-1730

In-Situ Environmental TEM Observation of the Formation of Defects in Growing Carbon Nanotubes

Presenting author: **Yoshida H.**

Authors: Yoshida H., Takeda S.

MS-2-P-1745

Electron microscopic evidence for a tribologically induced phase transformation as the origin of wear in diamond

Presenting author: **Zhang X.**

Authors: Zhang X., Schneider R., Müller E., Mee M., Meier S., Gumbsch P., Gerthsen D.

MS-2-P-1752

Atom-by-atom STEM EELS investigation of n- and p- doped graphene.

Presenting author: **Kepaptsoglou D. M.**

Authors: Kepaptsoglou D. M., Seabourne C. R., Hardcastle T., Nicholls R., Pierce W., Zan R., Bangert U., Scott A. J., Ramasse Q. M.

MS-2-P-1807

Water-soluble multi-layered graphene nanosheets via high temperature acidic treatment of graphite oxide

Presenting author: **Gevko P. N.**

Authors: Gevko P. N., Tur V. A., Okotrún A. V., Bulusheva L. G.

MS-2-P-1822

Relations between deficiencies in CVD deposited graphene and the lattice defects of the Ni (111) substrate

Presenting author: **Fogarassy Z.**

Authors: Fogarassy Z., Rümmeli M. H., Gorantla S., Bachmatiuk A., Dobrik G., Kamarás K., Biró L. P., Havancsák K., Lábár J. L.

MS-2-P-1848

Observation of Nanobubbles on Graphene with Atomic Force Microscopy

Presenting author: **Ko H. C.**

Authors: Ko H. C., Yang C. W., Hsu W. H., Hwang I. S.

MS-2-P-1947

Pt-terminating Carbyne Observed by Aberration-Corrected TEM

Presenting author: **Kano E.**

Authors: Kano E., Hashimoto A., Takeguchi M.

MS-2-P-1987

Active role of carbon during the formation of porous cerium oxide layer used as catalyst in fuel cell

Presenting author: **Lavkova J.**

Authors: Lavkova J., Khalakhan I., Chundak M., Vorokhta M., Potin V., Matolinova I., Matolin V.

MS-2-P-2025

Dynamic Motion of Ru-Polyoxometalate Ions (POMs) on Functionalized Few-Layer Graphene

Presenting author: **Ke X.**

Authors: Ke X., Turner S., Quintana M., Hadad C., Montellano-Lopez A., Carraro M., Sartorel A., Bonchio M., Praro M., Bittencourt C., Van Tendeloo G.

MS-2-P-2040

Spatial distribution of particles in the graphene-nanoparticles system

Presenting author: **Mantlikova A.**

Authors: Mantlikova A., Pacakova B., Kalbac M., Repko A., Vejpravova J.

MS-2-P-2084

Projected potential of graphene estimated by off-axis electron holography

Presenting author: **Geiger D.**

Authors: Geiger D., Biskupek J., Algara-Siller G., Kaiser U.

MS-2-P-2099

Microstructure investigation of Ru/CNT hybrid synthesized by different methods

Presenting author: **Zhang B.**

Authors: Zhang B., Pan X., Su D.

MS-2-P-2102

Formation mechanism and bending properties of carbon nanotetrahedron/nanoribbon structures

Presenting author: **Kohno H.**

Authors: Kohno H.

MS-2-P-2174

A new structural model for Graphene Oxide and Reduced Graphene Oxide as revealed by core EELS and DFT

Presenting author: **Tararan A.**

Authors: Tararan A., Zobelli A., Benito A., Maser W., Stéphan O.

MS-2-P-2219

Surface formation of electrospun carbon nanofiber mats controlled by HRSEM

Presenting author: **Zhigalina V. G.**

Authors: Zhigalina V. G., Ponomarev I. I., Razorenov D. Y., Ponomarev I. I.

MS-2-P-2376

Low-Energy Electron Diffractive Imaging of Graphene Based on a Single-Atom Electron Source

Presenting author: **Hsu W. H.**

Authors: Hsu W. H., Chang W. T., Lin C. Y., Chen Y. S., Lai W. C., Hwang I. S.,

MS-2-P-2386

Implantation and atomic scale characterization of self-interstitials in free standing graphene

Presenting author: **Kaiser U.**

Authors: Lehtinen O., Vats N., Algara-Siller G., Knyrim P., Kaiser U.

MS-2-P-2423

Topologically induced dielectric response in multilayer graphene nanocones

Presenting author: **Hage F. S.**

Authors: Hage F. S., Kepaptsoglou D. M., Ramasse Q. M., Seabourne C. R., Scott A. J., Prytz Ø., Gunnæs A. E., Helgesen G., Brydson R.

MS-2-P-2542

Atomic resolution of nanocrystalline Ge and SbTe encapsulated inside carbon nanotubes

Presenting author: **Marks S.**

Authors: Marks S., Kashtiban R., Sloan J.

MS-2-P-2592

Structural transformations in electrospun Pt-decorated carbon nanofibers

Presenting author: **Zhigalina O. M.**

Authors: Zhigalina O. M., Zhigalina V. G., Ponomarev I. I., Razorenov D. Y., Ponomarev I. I., Kiselev N. A.

MS-2-P-2607

Nitrogen-Doped Graphene/Carbon Nanotube Hybrids: In-Situ Formation on Bifunctional Catalysts and Their Superior Electrocatalytic Activity for Oxygen Evolution/Reduction Reaction

Presenting author: **Tian G.**

Authors: Tian G., Zhao M., Yu D., Kong X., Huang J., Zhang Q., Wei F.

MS-2-P-2694

TEM Characterization of ALD-grown TiO₂ on CNT

Presenting author: **Zhang Y.**

Authors: Zhang Y., Utke I., Erni R.

MS-2-P-2699

Multi-scale investigations of nitrogen doping in graphene

Presenting author: **Alloyeau D.**

Authors: Alloyeau D., Riccardi E., Lagoutte J., Ricolleau C., Wang G., Gallais Y.

MS-2-P-2786

Bilayer graphene structures formed by passage of current through graphite: HRTEM and HAADF-STEM studies

Presenting author: **Slater T.**

Authors: Harris P., Slater T., Haigh S., Hage F., Kepaptsoglou D., Ramasse Q.

MS-2-P-2825

Band Gap Expansion and Low-Voltage Induced Crystal Oscillation in Low-Dimensional Tin Selenide Crystals

Presenting author: **Sloan J.**

Authors: Sloan J., Carter R., Suyetin M., Dyson M. A., Trewitt H., Liu Z., Suenaga K., Giusca G., Kashtiban R. J., Bell G., Bichoutskaia E.

MS-2-P-2850

Influence of charge carriers density on flexural phonon spectrum in graphene measured by electron diffraction

Presenting author: **Kirilenko D. A.**

Authors: Kirilenko D. A.

MS-2-P-2878

Imaging and Spectroscopy of Graphene/Hexagonal Boron Nitride Lateral Heterostructure Interfaces

Presenting author: **Basile L.**

Authors: Basile L., Liu L., Gu G., Vlasiouk I., Lupini A. R., Unocic R. R., Idrobo J. C.

MS-2-P-2888

Wetting behavior of ionic liquid on a carbon nanotube

Presenting author: **Hirahara K.**

Authors: Imadate K., Hirahara K.

MS-2-P-2898

Measurement of the tensile force applied to a carbon nanotube during the axial shrinking deformation

Presenting author: **Hirahara K.**

Authors: Hirahara K., Nishiyama Y.

MS-2-P-2925

Probing the dynamics of structure defects and chemical dopants in molybdenum disulfide monolayer at elevated temperature by Cs-corrected STEM

Presenting author: **Jin C.**

Authors: Jin C., Lv D., Hong J.

MS-2-P-2934

Probing band structures of atomically thin molybdenum disulfide by EELS

Presenting author: **Hong J.**

Authors: Hong J., Li K., Jin C., Zhang X., Yuan J., Zhang Z.

MS-2-P-2938

HRTEM studies of Bamboo-like nanotubes found in the carbonaceous chondrite Allende meteorite.

Presenting author: **Rendon L.**

Authors: Rendon L., Cocho G., Cruz H., Ortega F., Reyes M., Buhse T., Garibay V., Santiago P.

MS-2-P-3037

Topography mapping of ultrathin layered crystals

Presenting author: **Dolle C.**

Authors: Dolle C., Niekil F., Mittelberger A., Butz B., Spiecker E.

MS-2-P-3075

Graphene-based materials and breast cancer cells

Presenting author: **Ponticelli G. S.**

Authors: Ponticelli G. S., Colone M., Rago I., Sarto M. S., Stringaro A.

MS-2-P-3097

TEM and EELS studies of structures obtained under the different conditions of the thermobaric treatment of C60+CS2

Presenting author: **Tyukalova E. V.**

Authors: Tyukalova E. V., Perezhogin I. A., Kulnitskiy B. A., Blank V. D., Popov M. Y., Alekseev M. V.

MS-2-P-3149

Nitrogen Doped Single-Walled Carbon Nanotubes: Experimental and Theoretical Atomic-Resolved EELS Studies

Presenting author: **Arenal R.**

Authors: Arenal R., March K., Ewels C. P., Rocquefelte X., Kociak M., Loiseau A., Stephan O.

MS-2-P-3164

STEM and EELS investigation of graphene nanoribbon epitaxially grown over SiC

Presenting author: **Gloter A.**

Authors: Gloter A., Palacio I., Celis A., Nair M., Zobelli A., Sicot M., Malterre D., Nevius M. S., Berger C., de Heer W. A., Conrad E. W., Taleb-Ibrahimi A., Tejeda A.

MS-2-P-3218

TEM electron diffraction analysis of few-layer Black Phosphorus

Presenting author: **Vicarelli L.**

Authors: Vicarelli L., Castellanos-Gomez A., Van der Zant H. S., Zandbergen H. W.

MS-2-P-3242

In situ growth of layered carbon

Presenting author: **Kling J.**

Authors: Kling J., Hansen T. W., Wagner J. B.

MS-2-P-3370

Novel 3-dimensional nanocomposite of covalently interconnected multiwalled carbon nanotubes using Silicon as an atomic welder

Presenting author: **Pulickal Rajukumar L.**

Authors: Pulickal Rajukumar L., Belmonte M., Roman B., Slimak J., Elías A. L., Cruz-Silva E., Perea-López N., Morelos-Gómez A., Terrones H., Miranzo P., Terrones M.,

MS-2-P-3372

Imaging of carbon nanostructures by low energy STEM below 5 keV

Presenting author: **Pokorná Z.**

Authors: Pokorná Z., Knápek A., Jašek O., Prášek J., Majzlíková P.

MS-2-P-3464

Dopants as Morphology Promoters: A Fundamental Study of the Role of Boron and Sulfur in the Formation of MWCNT Junctions

Presenting author: **McCreary A.**

Authors: Elías A. L., McCreary A., Pulickal Rajukumar L., Audiffred M., Cruz-Silva E., Reddy A. L., Kalaga K., Perea-López N., Feng S., Cruz Viana Neto B., Swanson D., Gutiérrez H. R., Vajtai R., Meunier V., Sumpter B. G., Ajayan P. M., Terrones H., Terrones M.,

MS-2-P-5760

Controlled deposition of iron based nanoparticles on few-layer graphene

Presenting author: **Melinte G.**

Authors: Melinte G., Liu X., Janowska I., Baaziz W., Moldovan S., Begin-Colin S., Pham-Huu C., Ersen O.

MS-2-P-5767

Setting up a Nanolab inside a TEM for 2D Materials research

Presenting author: **Sun L.**

Authors: Sun L.

MS-2-P-5789

Quantitative Atom-by-Atom Strain Analysis on Carbon-Supported Platinum Clusters for Fuel Cell Applications

Presenting author: **Daio T.**

Authors: DAIO T., STAYKOV A., LYTH S. M., LIU J., GUO L., TANAKA M., SASAKI K.,

MS-2-P-5802

A comparative study of quick and simple methods for thickness measurement of graphene by transmission electron microscopy

Presenting author: **Pettersson H.**

Authors: Pettersson H., Coleman J. N., Nicolosi V.

MS-2-P-5812

Morphology of oxidized graphite observed in cross section using FIB, TEM and ESEM

Presenting author: **Weisbecker P.**

Authors: Weisbecker P., Delehouze A., Rebillat F., Epherre J. F., Vignoles G.

MS-2-P-5842

Investigation of graphite/carbon spiral nanoribbons using FeCl₃-CuCl₂-graphite intercalation compounds as precursors

Presenting author: **Yang L.**

Authors: Yang L., Cao L. Y., Liu H. B., Chen J. H.

MS-2-P-5856

The structure of 1D TbBr_x crystals inside the SWCNTs.

Presenting author: **Kumskov A. S.**

Authors: Kiselev N. A., Kumskov A. S., Eliseev A. A., Vasiliev A. L., Zhigalina V. G., Sloan J.

MS-2-P-5880

Computational Study on Structural Changes of Carbon Nanomaterials under Electron Irradiation

Presenting author: **Yasuda M.**

Authors: Yasuda M., Yamamoto M., Kawata H., Hirai Y.

MS-2-P-5890

Laser-Induced Effects in Monolayer Graphene

Presenting author: **Mirzayev R.**

Authors: Mirzayev R., Herziger F., Poliani E., Mangler C., Meyer J. C., Maultzsch J.

MS-2-P-5944

Structural investigation of single layer Ti₃C₂ MXene sheets

Presenting author: **Karlsson L. H.**

Authors: Karlsson L. H., Persson P. O.

MS-2-P-5981

Low Loss and Core Loss Angular Resolved EELS of hexagonal Boron Nitride

Presenting author: **Fossard F.**

Authors: Fossard F., Schué L., Ducastelle F., Loiseau A.

MS-2-P-5983

CVD synthesis and characterization of hexagonal Boron Nitride thin films

Presenting author: **Andrieux A.**

Authors: Andrieux A., Dorval N., Fossard F., Schué L., Lavenus P., Loiseau A.

MS-2-P-5999

Counting the number of layer of graphene flakes embedded in polymer by STEM-EELS

Presenting author: **Haigh S. J.**

Authors: Prestat E., Shin Y., Gorgojo P., Zhou K. G., Schroeder S., Althumayri K., Harrison W., Budd P., Casiraghi C., Haigh S. J.

MS-2-P-6064

Nanopeapod-like structures of cobalt nanoparticles casted inside multi-walled carbon nanotubes

Presenting author: **Moldovan S.**

Authors: Moldovan S., Florea I., Melinte G., Baaziz W., Pham-Huu C., Ersen O.