

Schedule of HeteroNanoCarb-2023

Monday 9th January 2023

15:00/15:30	Departure Bus from Barcelona Downtown/Airport http://benasque.org/2023heteronano carb/#bus
~19:30	Arrival Bus to Benasque
20:30	Welcome cocktail

Tuesday 10th January 2023

Wednesday 11th January 2023

Thursday 12th January 2023

8:15 - 8:45	Registration - Badge				
8:45 - 8:50	Remarks - Announcements				
8:50-10:50	Session I	8:45-10:45	Session IV	8:45-10:45	Session VII
10:50-11:15	Coffee Break	10:45-11:15	Coffee Break	10:45-11:15	Coffee Break
11:15-13:15	Session II	11:15-13:15	Session V	11:15-13:00	Session VIII
13:30-18:30	Mini Workshops	13:30-18:30	Mini Workshops	13:15-18:30	Mini Workshops
18:30-20:10	Session III	18:30-20:00	Session VI	18:30-20:00	Session IX
20:15-21:55	Poster session / Cocktail	20:00-21:45	Poster session / Cocktail	21:00-...	Conference Dinner

Friday 13th January 2023

8:30	Departure Bus to Barcelona Airport/Downtown http://benasque.org/2023heteronano carb/#bus
12:45-13:45	Arrival Bus to Barcelona Airport

Tuesday 10th January 2023

8:15-8:45	Registration/badge	
8:50 – 10:50	Session - I	Chairs: R. Arenal & A. Zak
Invited Speaker	8:50 – 9:20	<i>Biomedical applications of devices based on surface-functionalized monolayer graphene</i> Vincent BOUCHIAT vbouchiat@grapheal.fr
	9:20 – 9:35	<i>Tuneable synthetic reduced graphene oxide scaffolds elicit high levels of glioblastoma interconnectivity in vitro</i> Christopher J. Brown Christopher.J.Brown@sussex.ac.uk
	9:35 – 9:50	<i>Continuous, macroscopic fibres of carbon nanotube intercalation compounds</i> Juan Jose Vilatela juanjose.vilatela@imdea.org
	9:50 – 10:05	<i>Size-dependent packing in nanosheet networks yields record-high electrical conductivities</i> Keiran Clifford seanogilvie1@icloud.com
	10:05 – 10:20	<i>Employing REDOX-Active additives for enhanced charge polarization and 200 % higher energy density in supercapacitor</i> Poulomi Nandi, Chandramouli Subramaniam poulominandi335@gmail.com
Invited Speaker	10:20 – 10:50	<i>Novel van der Waals compounds and their potential for optical biosensing</i> Shengxi Huang shengxi.huang@rice.edu
10:50 – 11:15	COFFEE BREAK	
11:15 – 13:15	Session - II	Chairs: V. Meunier & V. Bouchiat
Invited Speaker	11:15-11:45	<i>Engineering of quantum states in atomically precise graphene nanostructures</i> Oliver Gröning oliver.groening@empa.ch
	11:45-12:00	<i>Energy transfer from encapsulated structures to carbon nanotube hosts</i> Paola Ayala paola.ayala@univie.ac.at
	12:00-12:15	<i>Mid-infrared electrochromics enabled by intraband modulation in carbon nanotube networks</i> Peter J. Lynch, Manoj Tripathi, Aline Amorim Graf, Sean P. Ogilvie, Matthew J. Large, Jonathan P. Salvage, Alan B. Dalton p.j.lynch@sussex.ac.uk

	12:15-12:30	Graphite-GnP-salt composite: Thermal properties enhancement for energy storage applications Adi Lavi, Avia Ohayon-Lavi, Efrat Ruse, Leonid Vradman and Oren Regev adilavi92@gmail.com
	12:30-12:45	Photocatalyzed acylation of single walled carbon nanotubes with tetrabutyl ammonium decatungstate Ruben Canton-Vitoria and Nikos Tagmatarchis rucanvi@alumni.uv.es
Invited Speaker	12:45-13:15	Graphene oxide: more surprises Wolfgang K. Maser, A.M. Benito wmaser@icb.csic.es

Tuesday 10th January 2023

18:30 – 20:10	Session - III	Chairs: C. Ewels & J. Redwing
Invited Speaker	18:30-19:10	WS₂ & MoS₂ from 3D to 1D structures: Curvature and chirality induced properties of nanotubes S. Ghosh, C. Pallellappa, Yijin Zhang, Y. Iwasa, A. Di Bartolomeo, I. Kaplan-Ashiri, V. Bruser, Y. Gao, A. Zak alzak@hit.ac.il
	19:10-19:25	Nanotubes from Ternary WS₂(1-x)Se_{2x} Alloys: Stoichiometry Modulated Tunable Optical Properties M. B. Sreedhara, Yana Miroshnikov, Kai Zheng, Lothar Houben, Simon Hettler, Raul Arenal, Iddo Pinkas, Sudarson S. Sinha, Ivano E. Castelli and Reshef Tenne sreedharamb@weizmann.ac.il
	19:25-19:40	Structure and electronic properties of cobalt oxide based misfit nanotubes Simon Hettler, Kankona Singha Roy, Leela Panchakarla, Raul Arenal hettler@unizar.es
	19:40-19:55	PtSe₂ films grown by molecular beam epitaxy for high frequency optoelectronics E. Desgue, Pierre Legagneux, I. Verschueren, D. Jussey, D. Pommier, E. Grimaldi, D. Carisetti, et al. pierre.legagneux@thalesgroup.com
	19:55-20:10	Probing the interaction between 2D materials and tectomers Frank Lee, Manoj Tripathi, Sean P. Ogilvie, Aline Amorim Graf, Peter J. Lynch, Matthew J. Large, Rosa Garriga, John Parthenios, Konstantinos Papagelis, Edgar Muñoz, Alan B. Dalton frank.lee@sussex.ac.uk
20:10-21:45	Poster Session	Cocktail

Wednesday 11th January 2023

8:45 – 10:45	Session - IV	Chairs: O. Gröning & N. Tagmatarchis
Invited Speaker	8:45 – 9:15	<p><i>Electronic properties of twisted multilayer graphene</i> Jean-Christophe Charlier jean-christophe.charlier@uclouvain.be</p>
	9:15 – 9:30	<p><i>Bending and Flexing in Carbon and BN</i> Chris Ewels, Anthony Impellizzeri, Alberto Zobelli, Michel Amato, Emmanuel Pichaud, Alain Penicaud, Marc Monthieux, Maxime Bayle chris.ewels@cnrs-imn.fr</p>
	9:30 – 9:45	<p><i>Strongly correlated electronic ground state in the flat surface band of rhombohedral graphite</i> P. Vancsó, I. Hagymási, M. Syahid Mohd Isa, Z. Tajkov, K. Mártly, L. Oroszlány, J. Koltai, A. Alassaf, P. Kun, K. Kandrai, A. Pálinkás, L. Tapasztó, P. Nemes-Incze vancso.peter@ek-cer.hu</p>
	9:45 – 10:00	<p><i>Carbon nanoribbon formation by in-situ TEM manipulation of a C59N dithiolane derivative encapsulated into SWNTS</i> Mario Pelaez-Fernandez,, Anastasios Stergiou, Nikos Tagmatarchis, Chris Ewels, Raul Arenal Pelaezfernandezmario@gmail.com</p>
	10:00–10:15	<p><i>Taxonomy of 2D carbon allotropes</i> Vincent Meunier, Eduardo Costa Girãa, Alastair Macmillan vincent.meunier@psu.edu</p>
Invited Speaker	10:15–10:45	<p><i>Single and multi-layers of alkali metal atoms inside graphene and MoS2 bilayers as well as their heterostructures: a systematic first-principles study</i> Arkady V. Krasheninnikov a.krasheninnikov@hzdr.de</p>
10:45 – 11:15		COFFEE BREAK
11:15 – 13:15	Session - V	Chairs: S. Giordani & R. Tenne
Invited Speaker	11:15-11:45	<p><i>A retro-engineering demonstration of the existence and role of a liquid phase when depositing graphenes from methane onto carbon nanotubes at 1400°C</i> Marc MONTHIOUX, Germercy PAREDES, Thierry ONDARCUHU, Fabrice PIAZZA monthiou@cemes.fr</p>
	11:45-12:00	<p><i>Synthesis of boron doped diamond core-shell particles grown by MPCVD</i> K.Henni, I. Stenger, J-S. Merot, F. Fossard, J. C. Arnault and H. A. Girard kamilia.henni@cea.fr</p>
	12:00-12:15	<p><i>Tailoring confined carbyne</i> Clara Freytag, Weili Cui, Lei Shi, Emil Parth, Christin Schuster, Thomas Pichler clara.freytag@univie.ac.at</p>
	12:15-12:30	<p><i>Greener Approach towards Rapid Water Evaporation and Space Heating with Nanostructured Hard-Carbon</i> Ananya Sah, Sumit Sharma, Sandip Saha, Chandramouli Subramaniam ananya123@iitb.ac.in</p>

	12:30-12:45	Colloidal stability over months of highly hydrogenated nanodiamonds in water Lorris Saoudi, Hugues A. Girard, Eric Larquet, Michel Mermoux, Jocelyne Leroy, Jean-Charles Arnault lorris.saoudi@cea.fr
Invited Speaker	12:45-13:15	Synthesis and Characterization of Colloidal Nitrogen-Doped Graphene Quantum Dots as Biomarkers Elena D. Obraztsova, Pavel V. Fedotov, Darwin Kurniawan, Wei-Hung Chiang elobr@mail.ru

Wednesday 11th January 2023

18:30 – 20:00	Session - VI	Chairs: J.C. Charlier & E. Obraztsova
Invited Speaker	18:30-19:00	Carbon and B/N doped Nano Onion for biomedical applications Silvia Giordani silvia.giordani@dcu.ie
	19:00-19:15	Chemical and Structural TEM Analyses on Carbon and Related Nanomaterials R. Arenal arenal@unizar.es
	19:15-19:30	Carbon nanostructures towards metal-free photocatalysis A. Galán-González, E. Colom, C. Carrera, M.A. Álvarez-Sánchez, J. Hernández-Ferrer, A.M. Benito, W.K. Maser agalan@icb.csic.es
	19:30-19:45	Size-dependent porosity defines conductivity in liquid-exfoliated nanosheet networks Hannah J. Wood h.wood@sussex.ac.uk
	19:45-20:00	Water Processable P3HT Nanoparticle/carbon nanomaterial hybrids as active phase in photocathodes for hydrogen production Javier Hernández-Ferrer, Eduardo Colom, Clara Carrera, Alejandro Galán-González, Ana M. Benito, Wolfgang K. Maser jhernandez@icb.csic.es
20:00-21:45	Poster Session	Cocktail

Thursday 12th January 2023

8:45 – 10:45	Session - VII	Chairs: S. Huang & A. Krasheninnikov
Invited Speaker	8:45 – 9:15	Epitaxial growth of transition metal dichalcogenide monolayers and heterostructures for large area device applications Joan Redwing jmr31@psu.edu
	9:15 – 9:30	Atomic scale mapping of electrostatic field and potential in MBE grown TMD layers by DPC-CoM Djordje Dosenovic, Kshipra Sharma, Yiran Lu, Martien den Hertog, Jean-Luc Rouviere, Celine Vergnaud, Matthieu Jamet, Alain Marty and Hanako Okuno djordje.dosenovic@cea.fr
	9:30 – 9:45	Nano structures self-assembled at graphite surfaces by ion-beam-irradiation J.-S. Kim, S. Yoo, S. M. Yoon, J. Seo, J. Ahn, T. Wolkov, Y. Kwon, E. H. Ahlgren, S. Chiang, J. Muniz-Garcia, and R. Cuerno jskim@sookmyung.ac.kr
	9:45 – 10:00	Multi-scale analysis of epitaxially grown TMDs using 4D-STEM H. Okuno, D. Dosenovic, K. Sharma, Y. Lu, M. Den hertog, JL Rouviere, C. Vergnaud, M. Jamet, S. Pasko, L. Le Van-Jodin, A. Marty hanako.okuno@cea.fr
	10:00 – 10:15	Atomic scale observations of oxygen interactions with 2D MoS₂ and MoTe₂ E. Harriet Åhlgren, Alexander Markevich, Sophie Scharinger, Bernhard Fickl, Georg Zagler, Felix Herterich, Niall McEvoy, Clemens Mangler, Jani Kotakoski harriet.ahlgren@univie.ac.at
Invited Speaker	10:15 – 10:45	Shaping 1D Nanostructures with Surfaces Ernesto Joselevich ernesto.joselevich@weizmann.ac.il
10:45 – 11:15		COFFEE BREAK
11:15 – 13:00	Session - VIII	Chairs: E. Joselevich & M. Monthioux
Invited Speaker	11:15-11:45	Inorganic nanotubes: From WS₂ to "misfit" compounds R. Tenne reshef.tenne@weizmann.ac.il
	11:45-12:00	Hyperspectral Detection of the Fluorescence Shift between Chirality-Sorted Single-Wall Carbon Nanotube Enantiomers Miguel Ángel López Carrillo, Maksiem Erkens, Wim Wenseleers, Bea Botka, Juan G. Duque and Sofie Cambré miguelangel.lopezcarrillo@uantwerpen.be
	12:00-12:15	Single-walled carbon nanotubes charge management by controlled functionalization A. Setaro, A. Fiebor, M. Adeli, and S. Reich, setaro@physik.fu-berlin.de
	12:15-12:30	Pd-Coated Au Triangular Nanoprisms as Catalysts for Hot Carrier-Driven Photochemistry Abhijit Roy, Diptiranjana Paital, Saumyakanti Khtua aroy@unizar.es

	12:30-12:45	Charge distribution and dynamics of graphene oxide characterized with Kelvin Probe Force Microscopy Elisa Palacios-Lidón, A. Somoza , M. Navarro-Rodríguez, Jaime Colchero, Miguel Ortuño,,Eduardo Colom, Ana M. Benito, Wolfgang K. Maser elisapl@um.es
	12:45-13:00	Diameter-dependent single- and double-file stacking of squarilium dyes inside single-wall carbon nanotubes Sofie Cambré, Salomé Forel, Han Li, Stein van Bezouw, Jochen campo, Larua Wieland, Wim Wenseleers, Benjamin S. Flavel sofie.cambre@uantwerpen.be

Thursday 12th January 2023

18:30 – 20:05	Session - IX	Chairs: W. Maser & R. Arenal
Invited Speaker	18:30-19:00	Proximity induced Charge Density Wave in Graphene on TaS₂ Eva Andrei eandrei@physics.rutgers.edu
	19:00-19:15	Wetting studies using atomic force microscopy techniques: complexity on the nanoscale Lisa Almonte, Victoria Fernández and Jaime Colchero colchero@um.es
	19:15-19:30	Graphene-based Conformal Coating: How to Avoid Hot Spots? Avia Ohayon-Lavi, Gal Shachar-Michaely, Elad Koronio, Eilam Ylon, Gennady Ziskind and Oren Regev aviaoh@post.bgu.ac.il
Invited Speaker	19:30-20:00	TBA Alan Dalton A.B.Dalton@sussex.ac.uk
	20:00-20:05	Concluding remarks
21:00		Congress Dinner