

Schedule of HeteroNanoCarb-2017

Monday 11th December 2017

15:00/15:30	Departure Bus from Barcelona Downtown/Airport http://benasque.org/2017heteronanocarb/#bus
~20:15	Arrival Bus to Benasque
21:00	Welcome cocktail

Tuesday 12th December 2017

Wednesday 13th December 2017

Thursday 14th December 2017

8:45 - 8:55	Remarks - Anouncements				
8:55-10:45	Session I	8:45-10:55	Session IV	8:45-10:20	Session VII
10:45-11:10	Coffee Break	10:55-11:20	Coffee Break	10:20-10:45	Coffee Break
11:10-13:00	Session II	11:20-13:35	Session V	10:45-13:00	Session VIII
13:00-18:30	Mini Workshops	13:35-18:30	Mini Workshops	13:00-18:30	Mini Workshops
18:30-20:00	Session III	18:30-20:25	Session VI	18:30-20:20	Session IX
20:00-21:45	Poster session / Cocktail	20:25-21:45	Poster session / Cocktail	21:00-...	Conference Dinner

Friday 15th December 2017

8:00	Departure Bus to Barcelona Airport/Downtown http://benasque.org/2017heteronanocarb/#bus
~13:00	Arrival Bus to Barcelona Airport

Tuesday 12th December 2017

8:55 – 10:50	Session - I	Chairs: R. Arenal & T. Pichler
Invited Speaker	8:55 – 9:30	<i>Interfacial Engineering of Two-Dimensional Nanoelectronic Heterostructures</i> Mark C. Hersam m-hersam@northwestern.edu
	9:30 – 9:50	2D-0D HETEROSTRUCTURES FOR SPINTRONICS D.L. Mouafo* ¹ , F. Godel ² , B. Dlubak ² , B. Doudin ¹ , P. Seneor ² , J.F. Dayen ¹ * donald.mouafo@ipcms.unistra.fr
	9:50 – 10:10	<i>Stability and Phonon Anharmonicity of Black and Blue Phosphorus</i> Damien Tristant, Andrew Cupo and Vincent Meunier tristd@rpi.edu
Invited Speaker	10:10 – 10:45	ELECTRODYNAMICS OF 2D HETEROSTRUCTURES Luc Henrard luc.henrard@unamur.be
10:45 – 11:10		COFFEE BREAK
11:10 – 13:00	Session - II	Chairs: V. Meunier & P. Ruffieux
Invited Speaker	11:10-11:45	<i>Electrical probing of chains of carbon atoms – On the way to the ultimate 1D conductor ?</i> F. Banhart, F. Ben Romdhane, A. La Torre, O. Cretu, A. Botello-Mendez, J.-J. Adjizian, J.-C. Charlier florian.banhart@ipcms.unistra.fr
	11:45-12:05	<i>NO₂ detection from the ppb level up to ppm concentrations using single-walled carbon nanotube (SWCNT)-based field effect transistors</i> Leandro Sacco, Salomé Forel, Costel-Sorin Cojocaru leandro.sacco@polytechnique.edu
	12:05-12:25	<i>Interlayer locking and atomic-scale friction in commensurate small-diameter boron nitride nanotubes</i> Homin Shin, Keun Su Kim, Benoit Simard, and Dennis D. Klug Homin.Shin@nrc-cnrc.gc.ca
Invited Speaker	12:25-13:00	<i>Defect modulated optical conductivity of carbon nanotubes and nanotube hybrids with confined carbynes as novel advanced materials</i> T. Pichler thomas.pichler@univie.ac.at

Tuesday 12th December 2017

18:30 – 20:00	Session - III	Chairs: M. Hersam
Invited Speaker	18:30-19:05	<p><i>Controlling the Assembly of 2-D Materials at Interfaces</i> Alan Dalton A.B.Dalton@sussex.ac.uk</p>
	19:05-19:25	<p><i>TERAHERTZ TIME-DOMAIN ROOM-TEMPERATURE GRAPHENE DETECTOR</i> Pavel Chizhov, Vladimir Bukin, Tommi Kaplas, Cho-Fan Hsieh, Natsuki Nemoto, Konishi Kuniaki, Makoto Kuwata-Gonokami, Petr Obraztsov pvch@inbox.ru</p>
Invited Speaker	19:25-20:00	<p><i>Graphene Nanoribbon Heterostructures</i> Pascal Ruffieux pascal.ruffieux@empa.ch</p>
20:00-21:45	<i>Poster Session</i>	<i>Cocktail</i>

Wednesday 13th December 2017

8:45 – 10:55	Session - IV	Chairs: L. Wirtz & F. Banhart
Invited Speaker	8:45 – 9:20	Functional hybrids of single-walled carbon nanotubes via π-preserving covalent attachment Stephanie Reich reich@physik.fu-berlin.de
	9:20 – 9:40	Atomic Configuration of Functionalized Carbon Nanotubes Raul Arenal arenal@unizar.es
	9:40 – 10:00	Computational investigation of the translocation of single polypeptide through MoS2 nanopores from ionic conductance dynamics Maria Daniela Barrios Perez, Patrice Delarue, Patrick Senet, Vincent Meunier, Adrien Nicolai alehinad@gmail.com
	10:00 – 10:20	Transitional metal dichalcogenides functionalized with porphyrins for energy conversion Rubén Cantón Vitoria, Christina Stangel and Nikos Tagmtarchis canton@eie.gr
Invited Speaker	10:20 – 10:55	New insights on doping effect of (single-, double-wall-) carbon nanotubes by iodine Zubair A., Tristant D., Nie C., Monthioux M., et al.* marc.monthioux@cemes.fr
10:55 – 11:20		COFFEE BREAK
11:20 – 13:35	Session - V	Chairs: C. Bittencourt & A. Dalton
Invited Speaker	11:20-11:55	LET'S GO: A TRAVEL THROUGH THE WORLD OF GRAPHENE OXIDE Wolfgang K. Maser, Ana M. Benito wmaser@icb.csic.es
	11:55-12:15	TUNING AGGREGATION AND CHARGE TRANSFER OF P3HT NANOPARTICLES BY GO Emin Istif, Javier H. Fernandez, Esteban Urriolabeitia, Anastasios Stergiou, Nikos Tagmatarchis, Giuseppe Fratta, Matthew J. Large, Alan Dalton Ana M. Benito, Wolfgang K. Maser eistif@icb.csic.es
	12:15-12:35	Graphene Oxide based heterostructures: A Raman Characterization D. López-Díaz , J.A. Delgado, V. Clerico, M.D. Merchán , E. Diez , M.M. Velázquez dld@usal.es

	12:35-12:55	PHOTOACTIVITY OF ZINC OXIDE NANOPARTICLES AND THEIR HYBRIDS WITH GRAPHENE OXIDE S. Víctor-Román*, A. M. Benito, E.García-Bordeje, W. K. Maser svictor@icb.csic.es
	12:55-13:15	Controlled Assembly of Graphene Networks Using Polymer Latex Crystal Templates Manuela Meloni, Sandra Víctor Román, Alice King, Giuseppe Fratta, Mario Peláez Fernández, Sean Paul Ogilvie, Matthew J. Large, Raül Arenal, Ana Benito, Wolfgang Maser and Alan B. Dalton m.meloni@sussex.ac.uk
	13:15-13:35	Photopotential and photocurrent improvement of TiO2 in alkaline media by an electrochemically reduced graphene oxide layer. Javier Hernández-Ferrer, Olga Sanahuja, Sandra Víctor, M ^a Teresa Martínez, Alejandro Ansón-Casaos, Ana M ^a Benito, Wolfgang K. Maser jhernandez@icb.csic.es

18:30 – 20:25	Session - VI	Chairs: E. Obraztsova & N. Casañ-Pastor
Invited Speaker	18:30-19:05	CORRELATING THE STRUCTURE OF 2D MATERIALS WITH THEIR CATALYTIC ACTIVITY Maya Bar Sadan barsadan@bgu.ac.il
	19:05-19:25	SG MoS2 hybrid for enhanced electrocatalytic activity Antonia Kagkoura, Dimitrios K. Perivoliotis and Nikos Tagmatarchis akagkoura@eie.gr
	19:25-19:45	Functional mats of electrospun MoS2 composite fibres Aline Amorim Graf, Matthew Large, Sean Ogilvie, Jonathan Salvage, Alice King, Alan Dalton a.amorim-graf@sussex.ac.uk
	19:45-20:05	NON-CONJUGATED POLYMER DOTS: SHINING LIGHT ON STRUCTURE AND FLUORESCENCE Lorenzo Vallan, Ana M. Benito, M. Teresa Martínez, Esteban P. Urriolabeitia, Wolfgang K. Maser lvallan@icb.csic.es
	20:05-20:25	Experimental and DFT studies on the functionalisation of 2D nanomaterials with pyrene derivatives Y. Sayed-Ahmad-Baraza, R. Canton-Vitoria, M. Pelaez-Fernandez, B. Anothumakkool, C. Bittencourt, J. Gaubicher, R. Arenal, B. Humbert, N. Tagmatarchis, C. P. Ewels Yuman.Sayed-Ahmad@cnsr-immn.fr
20:25-21:45	Poster Session	Cocktail

Thursday 14th December 2017

8:45 – 10:20	Session - VII	Chairs: L. Henrard
Invited Speaker	8:45 – 9:20	<i>Excitons in layered materials: Rydberg-Series, Davydov-splitting in multi-layers, phonon- assisted optical absorption, and resonant Raman spectroscopy</i> k Ludger Wirtz, Fulvio Paleari, Thomas Galvani, Sven Reichardt, Henrique Miranda, Hakim Amara, François Ducastelle ludger.wirtz@uni.lu
	9:20 – 9:40	<i>OPTOELECTRONIC PROPERTIES IN ATOMICALLY THIN Mo_xW_(1-x)S₂ FLAKES VIA LOW-LOSS EELS</i> Mario Pelaez-Fernandez, Kazu Suenaga, Raul Arenal mariopf@unizar.es
	9:40 – 10:00	<i>Coaxial plasmonic nanowires for remote sensing</i> D. Funes-Hernando, J.Y. Mevellec, B. Humbert, M. Peláez-Fernández, R. Arenal, J.L. Duvail daniel.funes@cnsr-immn.fr
	10:00 – 10:20	<i>Breathe, shear, repeat... lattice vibration signatures of 2D materials</i> Vincent Meunier vincent.meunier@physics.org
10:20 – 10:45		COFFEE BREAK
10:45 – 13:00	Session - VIII	Chairs: M. Monthioux & M. Bar Sadan
Invited Speaker	10:45-11:20	<i>Plasma Fluorination of Carbon Nanomaterials</i> Carla Bittencourt carla.bittencourt@umons.ac.be
	11:20-11:40	<i>GRAPHENE AEROGEL WITH UNIDIRECTIONAL PORES OF TAILORED SIZE AND ITS APPLICATION AS HYDROPHOBIC ABSORBENT AND AS SUPPORT FOR CATALYTICALLY ACTIVE NANODIAMONDS</i> Enrique García-Bordejé, Sandra Victor-Román, Ana M. Benito, Wolfgang Maser jegarcia@icb.csic.es
	11:40-12:00	<i>Synthesis of nanodiamonds by hydrodynamic cavitation</i> Ponomareva E.A., Dushenko N.V., Voropaev S.A., Dnestrovskii A.Yu., Skinev V.M. katerinaii@inbox.ru
	12:00-12:20	<i>Molybdenum carbide – graphite-matrix composites with high thermo-mechanical performance</i> J. Guardia-Valenzuela, A. Bertarelli, F. Carra, N. Mariani, S. Bizzaro, R. Arenal jorge.guardia.valenzuela@cern.ch

	12:20-12:40	<i>Synthesis and characterization of a new conducting nanostructured carbon-based trihybrid as a neural bioelectrode material</i> N.M. Carretero, M.P. Lichtenstein, C. Suñol, J. Moral-Vico, E. Pérez, N. Casañ-Pastor eperez@icmab.es
	12:40-13:00	<i>Fluorescently Labelled Carbon Nano-Onions For Cellular Imaging and Diagnostic Applications</i> Stefania Lettieri, Adalberto Camisasca, Marta d'Amora, Alberto Diaspro and Silvia Giordani stefania.lettieri@iit.it

18:30 – 20:20	Session - IX	Chairs: S. Reich & W. Maser
Invited Speaker	18:30-19:05	<i>Applications of single-wall carbon nanotubes separated over conductivity type</i> E.D. Obraztsova, V. A. Eremina, A.I. Chernov, P.V. Fedotov, A.A. Tonkikh, V.I. Tsebro, E.A. Obraztsova, D.V. Rybkovskiy elobr@mail.ru
	19:05-19:25	<i>ELECTROCHEMICAL TREATMENT OF METALLIC- AND SEMICONDUCTING- ENRICHED SINGLE-WALLED CARBON NANOTUBES FILMS</i> A. Santidrián, J. Hernández-Ferrer, A.M. Benito, W.K. Maser, A. Ansón asantidrian@icb.csic.es
	19:25-19:45	<i>Role of Hydrogen in High-yield Growth of Boron Nitride NT (BNNT) and Synthesis of BNNT-metal/ceramic Hybrids</i> Keun Su Kim, Martin Couillard, Homin Shin, Christopher Kingston, and Benoit Simard KeunSu.Kim@nrc-cnrc.gc.ca
Invited Speaker	19:45-20:20	<i>Raman and Photoluminescence investigation of Individual Freestanding Double-Walled Carbon Nanotube</i> D.I. Levshov, M. Paillet, R. Parret, H.-N. Tran, T. Michel, T.T. Cao, V.C. Ngyen, R. Arenal, V.N. Popov, S.B. Rochal, J.-L. Sauvajol, A.-A. Zahab matthieu.paillet@umontpellier.fr dmitry.levshov@gmail.com
21:00		<i>Congress Dinner</i>

List of Posters

Tuesday and Wednesday (Dec. 12th & 13th 2017)

<p><i>THE INFLUENCE OF AIR AND LIQUID PHASE OXIDATION ON THE PROPERTIES OF SINGLE-WALLED CARBON NANOTUBE COLLOIDS</i> Alejandro Ansón-Casaos, Nekane Lozano, Ana Santidrián, Ana M. Benito, Wolfgang K. Maser alanson@icb.csic.es</p>
<p><i>First-Principles Study of Phonon Anharmonicity in Atomically-Thin Black Phosphorus</i> Andrew Cupo, Damien Tristant, and Vincent Meunier tristd@rpi.edu</p>
<p><i>CHEMICAL BEAM DEPOSITION OF TiS₂ THIN FILMS FOR OPERANDO XPS STUDIES OF Na ELECTROCHEMICAL INTERCALATION</i> Dino Tonti, Christian Pettenkofer, Wolfram Jaegermann dino.t@csic.es</p>
<p><i>Electrochemical exfoliation of graphite in various aqueous media and its use in Zn/O₂ flow cells</i> E. Pujades-Otero, E. Pérez, D. Tonti, N. Casañ-Pastor epujades@icmab.es</p>
<p><i>A study on mechanical interfacial behaviors between CFs and epoxy resin containing CNTs</i> Kwan-Woo Kim, Jong Ku Park, Hun Kim, Kay-Hyeok An, Byung-Joo Kim</p>
<p><i>-SITU MANIPULATION OF A C₅₉N-DITHIOLANE DERIVATIVE ENCAPSULATED INTO SWNTS</i> Mario Pelaez-Fernandez, Anastasios Stergiou, Nikos Tagmatarchis, Raul Arenal mariopf@unizar.es</p>
<p><i>PLASMONIC BEHAVIOUR OF CORE-SHELL Au-PEDOT NANOWIRES VIA LOW-LOSS EELS</i> Mario Pelaez-Fernandez, Daniel Funes-Hernando, Jean-Luc Duvail, Raul Arenal mariopf@unizar.es</p>
<p><i>UNRAVELING ROLE OF HYDROGEN IN HIGH-YIELDED GROWTH OF BORON NITRIDE NANOTUBES BY RF INDUCTION THERMAL PLASMA</i> Martin Couillard, Homin Shin, Mark Plunkett, Dean Ruth, Steven Walker, Christopher Kingston, Benoit Simard KeunSu.Kim@nrc-cnrc.gc.ca</p>
<p><i>In situ and operando Transmission Electron Microscopy of MWCNT nickel nanoparticles decoration by pulsed electrodeposition</i> Leandro Sacco, Mariam Ezzedine, Mihai Rusu, Costel-Sorin Cojocaru, Ileana Florea leandro.sacco@poltechnique.edu</p>
<p><i>Electromagnetic properties of multilayered 2D materials: application to graphene</i> B. Majérus, M. Lobet, M. Cormann, N. Reckinger, P. Lambin, L. Henrard bruno.majerus@unamur.be</p>
<p><i>2D materials characterization using Raman micro-spectroscopy and scanning probe microscopy</i> Pierre Brus, et al. pierre.brus@thalesgroup.com</p>
<p><i>High-frequency optoelectronic mixing with CVD graphene-based devices</i> A. Montanaro, S. Mzali, J.-P. Mazellier, S. Molin, C. Larat, O. Bezencenet, P. Legagneux pierre.legagneux@thalesgroup.com</p>
<p><i>In Situ Formation of Carbon Nanotubes Encapsulated within Boron Nitride Nanotubes via Electron Irradiation</i> R. Arenal and A. Lopez-Bezanilla arenal@unizar.es</p>