

chem2Dmat



SEPTEMBER 03-06, 2019 • DRESDEN, GERMANY

TENTATIVE PROGRAM (as of 30/08/2019)

PLENARY SESSION TUESDAY 03/09

08:00-09:00	REGISTRATION	
09:00-09:15	OPENING	
09:00-09:05	Opening Speech - Xinliang Feng (Organising Committee)	
09:05-09:15	Opening Speech - Hans Müller-Steinhagen (Rector of the TU Dresden)	
Chairperson: Xinliang Feng (TU Dresden, Germany)		
09:15-09:55	Klaus Müllen (Max Planck Institutes for Polymer Research, Germany)	KEYNOTE
	Graphene Nanoribbons – Merging the (1D) Conjugated Polymer and (2D) Graphene Worlds	
09:55-10:35	William Dichtel (Northwestern University, USA)	KEYNOTE
	Advances in 2D Polymerization	
10:35-10:50	Tanmay Banerjee (Max Planck Institute for Solid State Research, Germany)	ORAL
	2D covalent organic frameworks with built-in functional groups by sub-stoichiometric topological design	
10:50-11:15	Coffee break - Poster Session and Exhibition	
Chairperson: William Dichtel (Northwestern University, USA)		
11:15-11:45	Cinzia Casiraghi (University of Manchester, UK)	INVITED
	Water-based 2D-Inks: from all-inkjet printed devices to biomedical applications	
11:45-12:15	Alberto Bianco (IBMC-CNRS-Université de Strasbourg, France)	INVITED
	Multifunctional biodegradable graphene-based materials for cancer therapy	
12:15-12:30	Jiri Cervenka (FZU - Institute of Physics of the Czech Academy of Sciences, Czech Republic)	ORAL
	Chemical and Biomolecule Sensing using Graphene Field Effect Transistors	
12:30-12:45	Xiang-Yu Kong (Technical Institute of Physics and Chemistry, Chinese, China)	ORAL
	Bio-inspired nano-confined membrane: ion transport regulation and applications	
12:45-13:00	Mohsen Aadel (Freie Universitaet, Germany)	ORAL
	Study on the Mechanism of Graphene/Pathogen interactions	
13:00-14:00	Cocktail Lunch (offered by the organizers)	
14:00-14:30	Poster Session and Exhibition	
Chairperson: Alberto Bianco (IBMC-CNRS-Université de Strasbourg, France)		
14:30-15:00	Francesco Bonaccorso (IIT-Graphene Labs / BeDimensional, Italy)	INVITED
	Liquid phase production of 2D crystals for energy applications	
15:00-15:15	Hanjun Sun (TU Dresden, Germany)	ORAL
	Conjugated Acetylenic Polymers for Photoelectrochemical Water Reduction	
15:15-15:30	Xu-Bing Li (Technical Institute of Physics and Chemistry, Chinese Academy of Sciences, China)	ORAL
	2D transition metal carbide for catalysis	
15:30-15:45	Jayaramulu Kolleboyina (Regional Centre of Advanced Technologies and Materials, Czech Republic)	ORAL
	Ultrathin Two-Dimensional Cobalt Zeolite-Imidazole Framework Nanosheets for Electrocatalytic Oxygen Evolution	
15:45-16:00	Minghao Yu (TU Dresden, Germany)	ORAL
	Engineering van der Waals gap of MoO ₃ to achieve high-kinetics anode for dual-ion energy storage devices	

16:00-16:15	Panpan Zhang (TU Dresden, Germany)	ORAL
	Development of Novel Micro-Supercapacitors with Smart Functions	
16:15-16:30	Gang Wang (TU Dresden, Germany)	ORAL
	Anion storage in graphite: mechanism, kinetics and devices	
16:30-17:00	Jonathan Coleman (Trinity College Dublin, Ireland)	INVITED
	2D-based composites as battery electrodes	
17:00-17:30	Coffee break - Poster Session and Exhibition	
Chairperson: Jonathan Coleman (Trinity College Dublin, Ireland)		
17:30-18:10	Paolo Samori (Université de Strasbourg & CNRS – ISIS, France)	KEYNOTE
	Controlled doping of 2D materials with responsive molecules	
18:10-18:25	Mirco Panighel (CNR-IOM, Italy)	ORAL
	N-doped graphene: growth and reactivity	
18:25-18:40	Hai Wang (Max Planck Institute for Polymer Research, Germany)	ORAL
	Ionic permeability and interfacial doping of graphene on SiO ₂	
18:40-19:10	Shixuan Du (Chinese Academy of Sciences, China)	INVITED
	Electronic-Structure Engineering of Graphene by Semiconductor Intercalation	

WORKSHOP 1: Organic and organometallic 2D materials - WEDNESDAY 04/09

Chairperson: Aitor Mugarza (ICN2, Spain)		
09:00-09:30	Aurelio Mateo-Alonso (Ikerbasque / UPV/EHU, Spain)	INVITED
	Merging Twisted Aromatics and Framework Materials	
09:30-09:45	Tao Zhang (TU Dresden, Germany)	ORAL
	Rational Synthesis of Two-Dimensional Conducting Polymer Crystals	
09:45-10:15	Guillermo Minguez (University of Valencia, Spain)	INVITED
	Mechanical exfoliation in magnetic 2D coordination polymers	
10:30-11:15	Coffee break - Poster Session and Exhibition	

WORKSHOP 2: Synthesis, chemical exfoliation and functionalization - WEDNESDAY 04/09

Chairperson: Andrey Turchanin (Friedrich Schiller University Jena, Germany)		
11:15-11:30	Michal Otyepka (Palacky University Olomouc, Czech Republic)	ORAL
	Chemistry of Fluorographene, From Understanding to Applications	
11:30-11:45	Ryo Nouchi (Osaka Prefecture University, Japan)	ORAL
	Gate-Controlled Chemical Modification of Graphene	
11:45-12:00	Beata Szydłowska (Universität Heidelberg, Germany)	ORAL
	Nobel Metal Based TMDCs – accessing semiconducting properties of PtSe ₂ via Liquid Phase Exfoliation	
12:00-12:15	Mai Lê Anh (Technische Universität Dresden, Germany)	ORAL
	Topochemistry and Delamination of Layered Topological Insulators	
12:15-12:30	Dimitrios Chronopoulos (Palacky University / RCPTM, Czech Republic)	ORAL
	Alkynylation of Graphene via Sonogashira C-C Cross Coupling Reaction on Fluorographene	
12:30-12:45	Mhamed Assebban (Instituto de Ciencia Molecular (ICMol), Universidad de Valencia and Joint Institute of Advanced Materials and Processes (ZMP), Friedrich-Alexander-Universität Erlangen-Nürnberg, Spain)	ORAL
	Towards optimized preparation of few-layer antimonene and unveiling its oxidation tendency	
12:45-13:00	Ali Shaygan Nia (TU Dresden, Germany)	ORAL
	Exfoliation of Two-Dimensional Layered Materials Beyond Graphene	
13:00-14:30	Lunch	

WORKSHOP 2: Synthesis, chemical exfoliation and functionalization - WEDNESDAY 04/09

Chairperson: Arkady Krasheninnikov (Helmholtz-Zentrum Dresden-Rossendorf, Germany)		
14:30-15:00	Aitor Mugarza (ICN2, Spain)	INVITED
	On-surface synthesis of nanostructured graphene: from 0D to 2D	
15:00-15:30	Andrey Turchanin (Friedrich Schiller University Jena, Germany)	INVITED
	Synthesis of molecular 2D materials via electron irradiation induced chemistry	
15:30-15:45	Francesca Moresco (TU Dresden, Germany)	ORAL
	Functional molecular structures synthesized on surface	
15:45-16:00	Luca Bignardi (University of Trieste, Italy)	ORAL
	Highly-ordered single-layer MoS ₂ on the anisotropic Ag(110)	
16:00-17:00	Coffee break - Poster Session and Exhibition	

WORKSHOP 2: Synthesis, chemical exfoliation and functionalization - WEDNESDAY 04/09

Chairperson: Guillermo Minguez (University of Valencia, Spain)		
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17:00-17:30	Siegfried Eigler (Freie Universität Berlin, Germany) Oxo-Graphene – Synthesis and Heterostructures	INVITED
17:30-17:45	Peter Hess (University of Heidelberg, Germany) Dependence of bonding, structure, and performance of monolayers on the position in the periodic table	ORAL
17:45-18:00	Xue Liu (Leiden University, Netherlands) Synthesis of ultrathin nanoporous carbon membrane for efficient energy harvesting from salinity gradient	ORAL
18:00-18:30	Arkady Krasheninnikov (Helmholtz-Zentrum Dresden-Rossendorf, Germany) Tailoring the properties of inorganic two-dimensional materials by post-synthesis introduction of impurities and defects	INVITED

WORKSHOP 3 - WEDNESDAY 04/09

Chairperson: Chiara Zanardi (University of Modena and Reggio Emilia, Italy)		
08:45-09:00	Hui Guo (Institute of Physics, Chinese Academy of Sciences, China) Fabrication of large-scale graphene/2D-germanium heterostructure by intercalation	ORAL
09:00-09:15	Jinhua Sun (Chalmers University of Technology, Sweden) Synthesis of Janus graphene for energy storage	ORAL
09:15-09:30	Valeria Saavedra (Leiden University, Netherlands) Electron transfer at graphene edge electrodes: tunneling, electrochemistry and future applications	ORAL
09:30-09:45	Yang Su (Loughborough University, UK) Self-limiting growth of palladium nanosheets between graphene oxide layers	ORAL
09:45-10:00	Sergiy Mankovskyy (LMU Muenchen, Germany) Magnetic and transport properties of NbS ₂ intercalated by 3d-elements	ORAL
10:00-10:15	Bing-Ming Cheng (National Synchrotron Radiation Research Center, Taiwan) Fluorescent Nitrogen-vacancy Diamond as VUV Sensor	ORAL
10:15-10:30	Desissa Yadeta Muleta (Tianjin University, China) Small-Molecule-Doped Organic Crystals with Long-Persistent Luminescence	ORAL
10:30-11:15	Coffee break - Poster Session and Exhibition	

WORKSHOP 4 - WEDNESDAY 04/09

Chairperson: Aurelio Mateo-Alonso (Ikerbasque / UPV/EHU, Spain)		
11:15-11:30	Christian Dolle ((ICMol) - Universidad de Valencia, Spain) Cleaning graphene using the NanoBroom	ORAL
11:30-11:45	Ivan Bobrinetskiy (Biosense Institute, Serbia) In-plane junctions in graphene field-effect transistors generated by photochemical mask-less patterning	ORAL
11:45-12:00	Adriana Alieva (University of Manchester, UK) Effect of Graphene on the Crystallisation of Glycine	ORAL
12:00-12:15	Peer Schmidt (BTU Cottbus-Senftenberg, Germany) Crystal Growth of layered Halides MX ₃ by Vapor Transports	ORAL
12:15-12:30	Feruzha Tuyakova (NUST MISiS, Russia) Chemical vapor deposition: carbon and non-carbon nanomaterials	ORAL
12:30-12:45	James Kerfoot (University of Nottingham, UK) Electroluminescence from perylene diimide monolayers encapsulated in van der Waals tunnel diodes	ORAL
12:45-13:00	Christian Wagner (Helmholtz-Zentrum Dresden-Rossendorf, Germany) Interlayer excitons in van-der-Waals heterostructures: MoS ₂ on GaSe	ORAL
13:00-14:30	Lunch	

WORKSHOP 5 - WEDNESDAY 04/09

Chairperson: Lucia Gemma Delogu (University of Padua, Italy)		
14:30-15:00	Cecilia Mattevi (Imperial College London, UK)	INVITED
	Phase engineering of colloidal TMDs for efficient electrocatalytic HER	
15:00-15:15	Matias Blanco (University of Padova, Italy)	ORAL
	Enhanced carbocatalytic alcohol oxidation by Graphene Acid: Mechanistic insights for the control of the selectivity	
15:15-15:30	Alessandro Sala (University of Trieste and IOM-CNR, Italy)	ORAL
	Mimic 1D properties on continuous 2D materials: the pilot case of graphene on NiCx/Ni(100)	
15:30-15:45	Meng-Ying Lee (National Cheng Kung University, Taiwan)	ORAL
	Dehydration behavior and the derived delamination effect of boehmite	
15:45-16:00	Yuta Nishina (Okayama University, Japan)	ORAL
	Production of 2D nanocarbons through chemical, electrochemical, or mechanical methodologies	
16:00-17:00	Coffee break - Poster Session and Exhibition	

WORKSHOP 6: 2D Electronics & (Bio)Sensors - WEDNESDAY 04/09

Chairperson: Cecilia Mattevi (Imperial College London, UK)		
17:00-17:30	Lucia Gemma Delogu (University of Padua, Italy)	INVITED
	Future applications for 2D materials: the immune system scenario	
17:30-18:00	Chiara Zanardi (University of Modena and Reggio Emilia, Italy)	INVITED
	Graphene oxide based materials for electrochemical (bio)sensing	
18:00-18:15	Dingkun Ji (CNRS, France)	ORAL
	Covalent Multifunctional Carbon Nanodots for NIR Laser-Triggered Therapy	
18:15-18:30	Shirong Huang (TU Dresden, Germany)	ORAL
	Bio-compatible graphene exfoliation assisted by flavin mononucleotide sodium: a molecular dynamics study	

PLENARY THURSDAY 05/09

Chairperson: Georg Stefan Duesberg (Universität der Bundeswehr München, Germany)		
08:45-09:15	Steven De Feyter (KU Leuven, Belgium)	INVITED
	Periodic Non-Covalent and Covalent Functionalization of 2D Materials	
09:15-09:30	Martin Kalbac (J. Heyrovsky Institute of Physical Chemistry, Czech Republic)	ORAL
	Graphene functionalization for building of complex structures, nanoscale motion and resist free patterning	
09:30-09:45	Kunal Mali (KU Leuven, Belgium)	ORAL
	Covalent Functionalization of Surface-Supported Graphene and MoS ₂ : Chemical versus Electrochemical Routes	
09:45-10:00	Lakshya Daukiya (KU Leuven, Belgium)	ORAL
	SPM studies on functionalization of 2D transition metal dichalcogenides	
10:00-10:15	Kazukuni Tahara (Meiji University, Japan)	ORAL
	Porous Self-Assembled Monolayers as Templates for Chiral Chemical Functionalization of Graphite Surface	
10:15-10:45	Coffee break - Poster Session and Exhibition	
Chairperson: Steven De Feyter (KU Leuven, Belgium)		
10:45-11:25	Andreas Hirsch (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany)	KEYNOTE
	Chemical Functionalization of Graphene and Black Phosphorus	
11:25-11:40	Cian Bartlam (University of Manchester, UK)	ORAL
	Nanoscale Infrared Characterisation of Functional Groups on Two-dimensional Materials	
11:40-11:55	Hui Chen (Institute of Physics, The Chinese Academy of Sciences, China)	ORAL
	Large-scale formation of single-crystal one-third-hydrogenated graphene with anisotropic electronic properties	
11:55-12:10	Emilio Perez (IMDEA Nanociencia, Spain)	ORAL
	New tools for the chemical modification of 2D materials	
12:10-12:40	Georg Stefan Duesberg (Universität der Bundeswehr München, Germany)	INVITED
	Functionalisation Strategies of Monolayer Surfaces	
12:40-14:00	Cocktail Lunch (offered by the organizers)	
14:00-14:30	Poster Session and Exhibition	
Chairperson: Andreas Hirsch (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany)		
14:30-15:10	Roman Fasel (EMPA, Switzerland)	KEYNOTE
	Nanographenes with intrinsic π -magnetism	
15:10-15:25	Ajayakumar Rathamony (TU Dresden, Germany)	ORAL
	Zigzag-Edged Nanographenes: Bottom-up Synthesis of peri-Tetracene and Circumanthracene	
15:25-15:40	Kun Xu (TU Dresden, Germany)	ORAL
	Engineering of Nanographenes with Doping and Pores	
15:40-15:55	Junzhi Liu (The University of Hong Kong, Hong Kong SAR)	ORAL
	Atomically Precise Defect Engineering in graphene	
15:55-16:30	Coffee break - Poster Session and Exhibition	
Chairperson: Martin Lohe (TU Dresden, Germany)		
16:30-17:10	Mircea Dinca (Massachusetts Institute of Technology, USA)	KEYNOTE
	Electrical Conductivity in 2D Metal-Organic Frameworks	
17:10-17:40	Christof Wöll (Karlsruhe Institute of Technology (KIT), Germany)	INVITED
	Design of Crystalline 2D Materials: The SURMOF Approach	
17:40-17:55	Irena Senkovska (Technische Universität Dresden, Germany)	ORAL
	Top-down delamination of the two-dimensional metal-organic frameworks	

17:55-18:10	Renhao Dong (TU Dresden, Germany)	ORAL
	Interfacial Synthesis of 2D Conjugated Polymers: the Rise of Organic 2D Materials	
18:10-18:25	Nerea Bilbao (KU Leuven, Belgium)	ORAL
	On-Surface Synthesis of Covalent Organic Frameworks	
18:25-18:40	Long Chen (Tianjin University, China)	ORAL
	De Novo Design and Facile Synthesis of 2D Covalent Organic Frameworks: A Two-in-One Strategy	
18:40-19:10	Thomas Bein (Ludwig-Maximilians-Universität München, Germany)	INVITED
	Optoelectronic Processes in Covalent Organic Frameworks	

Industrial Forum THURSDAY 05/09

Chairperson: Xinliang Feng (TU Dresden, Germany)		
14:30-14:50	Rune Wendelbo (Abalonyx, Norway)	INVITED
	Emerging Industrial Applications of Graphene Oxide	
14:50-15:10	Martin R. Lohe (Sixonia / TU Dresden, Germany)	INVITED
	E-Graphenes: Ease of use through chemical functionalization	
15:10-15:30	Pascal Freund (Trevira GmbH, Germany)	INVITED
	Conductivity and more?: GRM enables new properties in PET filaments	
15:30-15:50	Jorge Eduardo Adatti Estevez (Infineon, Germany)	INVITED
	High-yield production and characterization of graphene-based chemiresistors for environmental sensing	
15:50-16:30	Coffee break - Poster Session and Exhibition	

20:30

THURSDAY SEPTEMBER 05, 2019
Chem2dmat2019 Conference Dinner

PLENARY FRIDAY 06/09

Chairperson: Sai Manoj Gali (Université de Mons - UMONS, Belgium)		
08:45-09:25	Ute Kaiser (Ulm University, Germany)	KEYNOTE
	Properties of low-dimensional materials by high-resolution low-voltage and/or low-dose TEM	
09:25-09:40	Haoyuan Qi (TU Dresden, Germany)	ORAL
	Near atomic resolution imaging of an imine-based 2D polymer using aberration-corrected high-resolution electron microscopy	
09:40-10:10	Camilla Coletti (IIT, Italy)	INVITED
	Going beyond copper: wafer-scale synthesis of graphene on sapphire	
10:10-10:40	Vincenzo Palermo (Chalmer University of Technology, Sweden)	INVITED
	Charge and gas transport in complex 2-dimensional anisotropic systems	
10:40-11:15	Coffee break - Poster Session and Exhibition	
11:15-11:30	Poster Awards Ceremony	
Chairperson: Thomas Heine (TU Dresden Germany)		
11:30-12:00	Sai Manoj Gali (Université de Mons - UMONS, Belgium)	INVITED
	Electronic structure and charge transport simulations in GRM-organic hybrids: Where Chemistry meets Physics	
12:00-12:15	Frederik Schiller (CFM-MPC (CSIC), Spain)	ORAL
	Structure and electronic properties of h-BN on curved crystals	

12:15-12:30	Kannan Balasubramanian (Humboldt Universität zu Berlin, Germany)	ORAL
	The unique interplay between interfacial chemistry and electronic structure in graphene	
12:30-12:45	Stefano Casalini (University of Strasbourg, France)	ORAL
	Reduced graphene oxide transistors: towards wearable e-platforms	
12:45-13:15	Martin Pumera (University of Chemistry and Technology, Czech Republic)	INVITED
	Electrochemistry of 2D Materials	
13:15	Closing remarks & Chem2Dmat2021 announcement	