

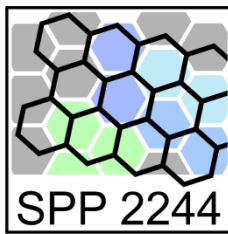
Feedback from Steering Committee meeting

What happened since yesterday

- >11 publications reported
- Some questions collected to DFG
 - How do I report if I don't submit a new proposal for 2nd period
 - How do I report if I change the consortium
 - Can I apply for my own position
 - Can I apply for less than 3 years (as I still have funding)
- Open Access publication: any restrictions: at least CC-BY-NC, no predatory journals (Beall's list)
- Possibly already now a virtual issue (before review colloquium) as outreach activity of 1st funding period
- Summer School 2024: Berlin (Patryk Kusch and Berlin colleagues)

Outreach

- #SPP2244



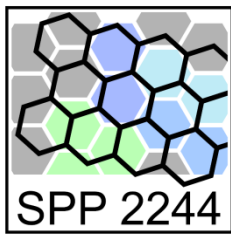
Tweets Antworten Medien Gefällt mir

 **2dmp** @2dmp_spp2244 · 23 Std. ⋮

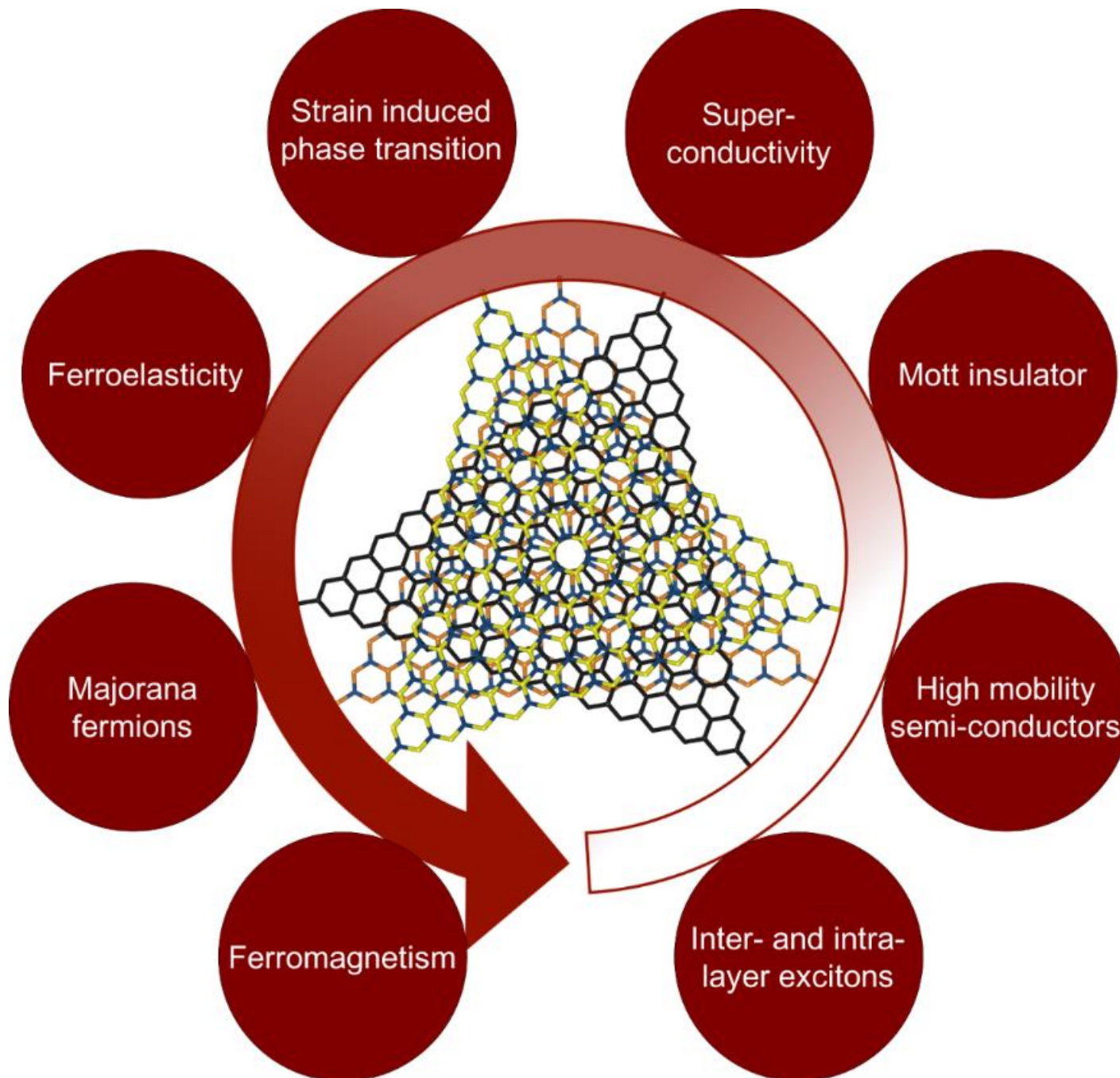
Kickoff to the spring meeting of the SPP 2244 “2D Materials - Physics of van der Waals [hetero]structures” at Physikzentrum Bad Honnef with a talk by Patryk Kusch from @FU_Berlin. We are looking forward to three interesting days full of #2Dmaterial #research.



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BACK IN THE DAYS...

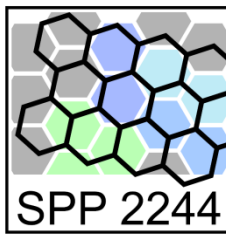


Priority Program 2244

Schwerpunktprogramm (SPP) 2244

Two-Dimensional Materials: Physics of van der Waals [hetero]structures (2DMP)

Review Colloquium, Bad Honnef,
February 26-28, 2020

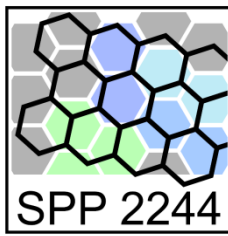


Welcome to the board of reviewers

- Prof. Dr. **Manfred Bayer**, TU Dortmund, Germany
- Prof. Dr. **Johann Coraux**, Université Joseph Fourier, Grenoble, France
- Dr. **Otakar Frank**, Academy of Sciences of the Czech Republic, Prague, Czech Republic
- Dr. **Riccardo Frisenda**, Consejo Superior de Investigaciones Científicas (CSIC), Madrid, Spain
- Prof. Dr. **Christoph Gadermaier**, Politecnico di Milano, Milano, Italy
- Prof. Dr. **Annick Loiseau**, CNRS, Chatillon, France
- Prof. Dr. **Xavier Marie**, Laboratory for Nanophysics Magnetism and Optoelectronics, Toulouse, France
- Prof. Dr. **Ingrid Mertig**, Martin-Luther-Universität Halle-Wittenberg, Germany
- Prof. Dr. **Alberto Morpurgo**, University of Geneva, Geneva, Switzerland
- Prof. Dr. **Francois M. Peeters**, University of Antwerp, Antwerp, Belgium
- Prof. Dr. **Paulina Plochocka**, Universite de Toulouse III (Paul Sabatier), Toulouse, France
- Prof. Dr. **Udo Schwingenschlögl**, King Abdullah University of Science and Technology (KAUST), Thuwal, Saudi-Arabia
- Prof. Dr. **Mauricio Terrones**, Pennsylvania State University, USA

Research Objectives and Research Areas

Research Objectives



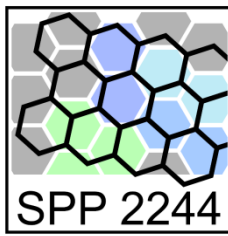
Fundamental research goal: To explore and to deeply understand the physical phenomena in 2D vdW materials that are emerging from interlayer interactions, moiré superstructures and/or proximity effects.

Objective 1: To explore the impact of interlayer interactions on the electronic properties and transport properties in 2D vdW materials.

Objective 2: To investigate the optical properties emerging from interlayer interactions in 2D vdW materials.

Objective 3: To study collective and correlated phenomena leading to exotic effects in 2D vdW materials.

Common Research Area (via PhD student and postdoc exchange program)



Common Research Area will be introduced by Janina Maultzsch

Six-years vision

Research Area A: 2D semiconductor heterostructures

- external control of parameters (gating, strain, twist angle, magnetic field, optical excitations, thermal gradients)
- mobility and direction dependent charge, spin and thermal transport.

Research Area B: Control and manipulation of excitons in 2D vdW [hetero]structures

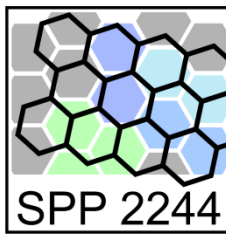
- stabilization, flux, and dissociation of excitons,
- interlayer charge transfer,
- creation of exotic phenomena (Bose-Einstein-condensates).

Research Area C: Realization of new topological effects

- quantum spin Hall effect and topologically protected quasiparticles (e.g. Majorana fermions)
- topological states of matter (high temperature superconductivity and ferromagnetism in 2D)

As witnessed by the recent discoveries of totally unexpected novel phenomena, it is very likely that yet unforeseen effects will be found within the course of this SPP, which is one of its strong motivations.

SPP 2244 applications

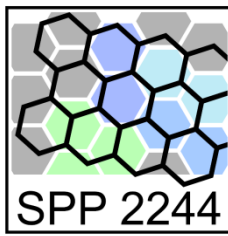


- **104 PI** from Germany (referenced)
plus 19 associated scientists
 - Only one proposal per PI, **THANK YOU!!!**
 - International PI: 1 Switzerland,
1 Luxembourg, 3 Israel
 - 69 projects, 1 central project
 - 17 first proposals
 - 13 female PI
 - 27 non-university PI (15 Helmholtz,
7 MPI, 5 Leibniz)
- 1st funding period (3 years)
- Funds approved: 6.600.000 €
 - Funds requested: 19.127.225 €
 - **Funding rate: 34.5%**
 - **43 PIs received funding**
 - **39 PhD positions**

Excluded topics (from the Call of Proposals)

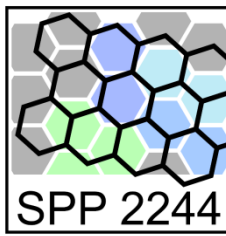
- **Individual 2D crystals** such as graphene, transition metal chalcogenides or topological insulators, including those that are encapsulated for protective reasons only,
- Research on **defect** properties,
- **Mass transport** and **intercalation** in 2D vdW systems,
- Applications in **catalysis**, including photocatalysis, and **synthetic** approaches to 2D materials,
- The interaction of 2D crystals with **molecules** or with **substrates**,
- **Functionalised** 2D crystals,
- **Devices and circuitries**, including thermal and thermoelectric ones, if not required for studying fundamental physical properties of vdW [hetero]structures.

Wishlist of the programme committee for project selection



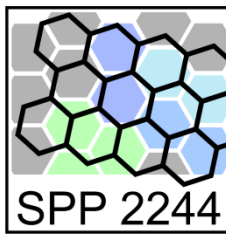
- ✓ **Excellence in science**
- ✓ Networking (proposals shall be well-embedded in SPP 2244, consortia are welcome)
- ✓ High diversity in research topics
- ✓ Roughly same number of projects (PIs) contributing to A/B/C
- ✓ Services to the community

Timeline



- **Latest April 1st 2023: Call for proposals**
- **June 28th 2023: Deadline for proposal submission (Wednesday)**
 - **Note: only via elan, account required**
- **October 29-31st: Review colloquium**
- **April 1st 2024: 2nd funding period starts**

Some DFG news



- New template for proposals
 - Note: in publication list, ALL AUTHORS must be mentioned (no et al.)
 - No list of own publications, but you can MARK 10 PUBLICATIONS in the references
- New template for CVs
- For new PIs: please register beforehand in elan