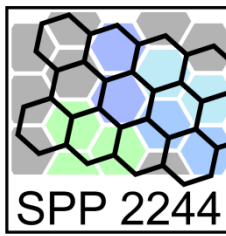


# SPP 2244

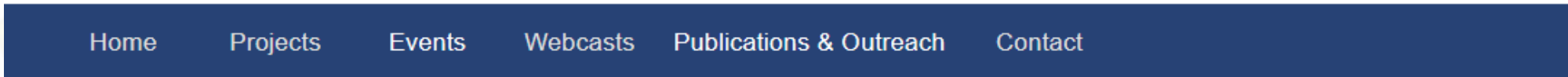
## The SPP Website

# The 2dmp website



## 2D Materials – Physics of van der Waals [hetero]structures

*DFG Priority program 2244*



### Scientific Overview

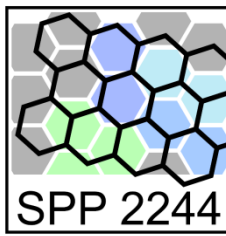
News

Two-dimensional (2D) materials are crystals with a thickness of only one or very few atoms. After the discovery of graphene, the most prominent representative of this class of materials, many other 2D crystals have been identified, often with intriguing properties that have no counterparts in three-dimensional solids.

Furthermore, stacking 2D crystals in a well-defined manner can result in new states of matter, even if the individual layers are only weakly bound by van der Waals (vdW) interaction. The most striking example, published in 2018, is the transformation of bilayer graphene into a superconductor if the layers are twisted by a “magic angle” of about 1.1 degree. Such a delicate structure manipulation has become possible thanks to the massive research efforts in graphene-related materials, and opens the door to the investigation of phase transitions imposed by the so-called proximity effect, for example between Mott insulator and

# Website: news

- News tab, also reachable from landing page
- Important information for all SPP members



TECHNISCHE UNIVERSITÄT DRESDEN 2DMP

Home Projects Events Webcasts Publications & Outreach Contact

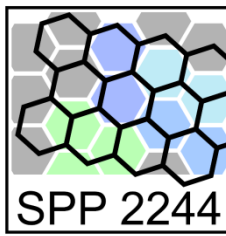
**Kickoff Meeting (October 12/13): schedule and online attendance**  
published on 2020-10-08  
You can now find the latest schedule and information regarding streaming for remote participants on our website!

**Latest update from DFG**  
published on 2020-08-26  
Decision letters are expected for the mid of September 2020. Projects can start as soon as the decision letters are sent.

**DFG selected 20 research projects with 38 PI, funding tentatively starting on Sep 1, 2020.**  
published on 2020-04-15  
DFG selected 20 research projects with 38 PI for funding. In addition, four groups are associated to SPP 2244. The first funding period is scheduled to start on Sep 1, 2020.

# Website: projects

- List of all projects
- Details:
  - Abstract
  - Contact
  - Website



Technische Universität Dresden 2DMP

Home Projects Events Webcasts Publications & Outreach Contact

**2D Materials – Physics of van der Waals [hetero]structures**  
DFG Priority program 2244

**Scientific Projects**

- **Artificial multiferroic van der Waals heterostructures**  
Stuart Parkin (MPI Halle)
- **Atomistic theory of excited states in van der Waals heterostructures: Moiré confinement strain and electric field effect**  
Gabriel Bester (Universität Hamburg)
- **Chasing polaritons: A pathway to investigate the optoelectronic properties of van der Waals heterostructures**  
Patrik Kusch (FU Berlin), Stephanie Reich (FU Berlin)
- **Compressive strain in stacked 2D materials: from proximity to metastable hybridization**  
Roland Bennewitz (Leibniz INM)
- **Correlated miniband and multivalley physics in twisted transition metal dichalcogenides**  
Tim Wehling (Universität Bremen), Ursula Wurstbauer (University of Münster)
- **Electronic control of spin-orbit and magnetic exchange coupling in graphene vdW-heterostructures (SOControl)**  
Christoph Kastl (TU Munich), Marko Burghard (MPI FKF), Alexander Holleitner (TU Munich)
- **Interlayer excitons in advanced. CVD-based van der Waals heterostructures with controlled moiré wavelenath**



# Website: events

- Past events
- Upcoming events
- Details on subpages!



TECHNISCHE UNIVERSITÄT DRESDEN 2DMP

 **2D Materials – Physics of van der Waals [hetero]structures**  
*DFG Priority program 2244*

Home Projects **Events** Webcasts Publications & Outreach Contact

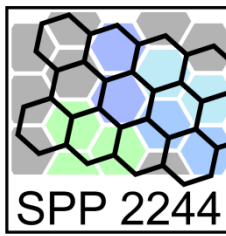
### Upcoming Events

- **Kickoff meeting:** October 12/13 2020 in Erfurt.

### Past Events


- **Review Colloquium:** DFG review colloquium at Physikzentrum Bad Honnef, Feb 26 2020, 6pm to Feb 28 2020, 2pm
- **Networking symposium:** Preparatory colloquium at IFW Dresden, September 12 2019, 2 pm - September 13 2019, 3 pm

# Website: talks and webcasts



- Please send information about talks, seminars and webcasts within and related to the SPP to the office
- Announce on website
- Share link with SPP members

TECHNISCHE UNIVERSITÄT DRESDEN 2DMP

 **2D Materials – Physics of van der Waals [hetero]structures**  
DFG Priority program 2244

Home Projects Events **Webcasts** Publications & Outreach Contact

### Webcasts

<b>Title:</b>	Kickoff Meeting Erfurt, day 2
<b>Speaker:</b>	Thomas Heine
<b>Time &amp; Link:</b>	13.10.2020 09:00, <b>Public webcast</b> (Password: 2DM+Phys)
<b>More info:</b>	<a href="#">Schedule</a>

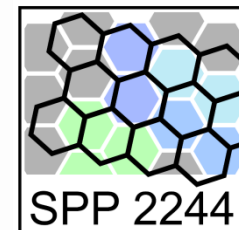
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<b>Title:</b>	Kickoff Meeting Erfurt, day 1
<b>Speaker:</b>	Thomas Heine
<b>Time &amp; Link:</b>	12.10.2020 13:00, <b>Public webcast</b> (Password: 2DM+Phys)
<b>More info:</b>	<a href="#">Schedule</a>

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<b>Title:</b>	Condensation signatures and multi-valley physics of excitons in van-der-Waals hetero-bilayers
<b>Speaker:</b>	Ursula Wurstbauer
<b>Time &amp; Link:</b>	09.04.2020 10:15, <b>Public webcast</b> (Password: wurstbauer)

# Website: Publications



- Publications related to SPP on website
- Please send to office:
  - Publications (DOI)
  - Preprints
  - Articles in other media
- Send info when published

The screenshot shows the website for the DFG Priority program 2244, '2D Materials – Physics of van der Waals [hetero]structures'. The header includes the TU Dresden logo, the program name, and navigation icons. A red circle highlights the 'Publications & Outreach' menu item. The main content area lists publications, preprints, and media coverage.

**2D Materials – Physics of van der Waals [hetero]structures**  
DFG Priority program 2244

Home Projects Events Webcasts **Publications & Outreach** Contact

**Publications**

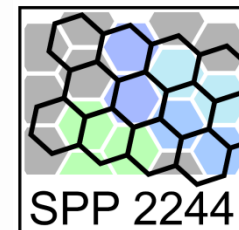
- **Making 2D topological polymers a reality**  
Y. Jing, T. Heine  
Nat. Mater. (2020) DOI: 10.1038/s41563-020-0690-z

**Preprints**

**In the Media**


- **When predictions of theoretical chemists become reality** (TUD Press release at Phys.Org, 22.05.2020)  
In a *Nature Materials* News and Views article, "Making 2-D Topological Polymers a reality", Prof. Heine describes how his theoretical predictions made in 2019 about topological 2-D polymers became an experimental reality recently.
- **Priority Programme "2D Materials – Physics of van der Waals [hetero]structures (2DMP)" (SPP 2244) established** (DFG Press release, *Information für die Wissenschaft* Nr. 39, 07.06.2019)  
In 2019 the Senate of the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) established the Priority Programme "2D Materials – Physics of van der Waals [hetero]structures (2DMP)" (SPP 2244).

# Website: office contact



- SPP 2244 office
- Contact details
  - E-Mail
  - Phone
- Programme contact at DFG


TECHNISCHE UNIVERSITÄT DRESDEN 2DMP

 **2D Materials – Physics of van der Waals [hetero]structures**  
DFG Priority program 2244

Home Projects Events Webcasts Publications & Outreach **Contact**


**SPP 2244 Office**

*Administrative Contact*



Mr. Florian Arnold

*Scientific Contact / Coordinator*

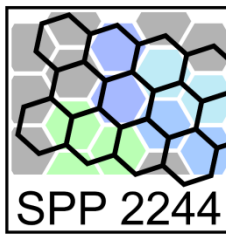


Prof. Dr. Thomas Heine

Technische Universität Dresden  
School of Science  
Faculty of Chemistry and Food Chemistry  
Theoretical Chemistry  
01062 Dresden



# Website: additional features



From left to right:

- Back to front page
- News
- Forum → Mattermost
- Contact
- Twitter

The screenshot shows the website header with the logo of Technische Universität Dresden and the acronym 2DMP. A navigation bar contains icons for Home, News, Forum, Contact, and Twitter, which are circled in red. Below the header, the main title '2D Materials – Physics of van der Waals [hetero]structures' is displayed, along with the DFG Priority program 2244 logo. A secondary navigation bar lists 'Home', 'Projects', 'Events', 'Webcasts', 'Publications & Outreach', and 'Contact'. The main content area features a 'Scientific Overview' section with a 'News' link and a detailed paragraph about 2D materials. Below this is a 'Programme Committee' section.

TECHNISCHE UNIVERSITÄT DRESDEN 2DMP

**2D Materials – Physics of van der Waals [hetero]structures**  
DFG Priority program 2244

Home Projects Events Webcasts Publications & Outreach Contact

**Scientific Overview** [News](#)

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**Programme Committee**