

マテリアルサイエンス系セミナー

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“1D, 2D and 3D nanomaterials: from quantisation, Dirac-fermion optics to non-linear phenomena”

講演者: エクセレントコア推進本部

特別招聘教授 **Vojislav Krstić 氏**

Distinguished Professor, Vojislav Krstić
Headquarters for Excellent Core Promotion

日時: 令和2年3月12日(木) 15:30~17:00

場所: マテリアルサイエンス系研究棟4棟8階 中セミナー室

講演要旨:

Nanomaterials are the most promising candidates for the future evolution of technology due to their unique functionalities. The latter originate from the exciting physical properties nanomaterials have, which are strongly correlated with the dimensionality of their electronic system.

In the present talk, the impact of dimensionality on the physics of nanomaterials will be elucidated on a few examples. Also, particular material-specific characteristics will be underlined. This will start with 2D materials, specifically (functionalised) graphene and black phosphorous addressing Dirac-fermions and valley isospins. Then, 3D nanohelices with sub-100 nm feature sizes will be discussed and the non-linearity of their electronic and optical response described. Finally, the electronic transport in (quasi) 1D nanowires of Ge and of the wide bandgap semiconductor SiC and their associated device functionalities will be presented.

講演者略歴:

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| 2002 | PhD at Max-Planck-Institut FKF/EPFL |
| 2002 - 2005 | Postdoctoral Researcher, High Magnetic Field Laboratory, Grenoble |
| 2005 - 2007 | Scientist at the CNRS National Pulsed Magnetic Field Laboratory (LNCMP) Toulouse |
| 2007 - 2013 | Assistant Professor, School of Physics/CRANN, Trinity College Dublin |
| 2013 - | Professor for Applied Physics, Physics Department, Friedrich-Alexander-Universität Erlangen-Nürnberg |
| 2013 - | Adjunct Professor, School of Physics/CRANN, Trinity College Dublin |

参加申込・予約は不要です。直接会場にお越しください。

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