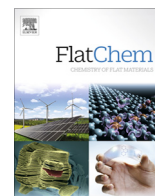




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Preface

Special issue graphene and 2D materials in Korea

I am very pleased to present this issue of the FlatChem as a special issue entitled ‘Graphene and 2D Materials in Korea’. This special issue is the first one in FlatChem since this journal was launched. As a starting editorial board member of new Journal ‘FlatChem’, I wanted to collect high impact papers from Korean leading experts in graphene and 2D materials field in order to make this special issue symbolic. Korea is one of the most active 5 countries that invested fund in research on graphene materials and hold related patents. This research interest and activities on graphene have been expanded to various other 2D materials significantly. The potentials of graphene and 2D materials continue to expand internationally. The potential applications of graphene includes electrodes for flexible/wearable devices, conductive inks, sensors, RF devices, batteries, supercapacitors, lubricants, gas barrier, heat dissipation, flame retardants, coating materials etc. The potential applications of other 2D materials also include energy harvesting devices, energy storage devices, photoelectrochemical devices, nanoelectronic devices, flexible/wearable devices etc.

This special issue reports various topics related to graphene and 2D materials which cover not only materials aspects such as synthesis, composite, growth, self-assembly, stretchable electrodes, and physical characterization but also device applications such as energy harvesting devices (e.g. solar cells, nano generators), nanoelectronic devices (e.g. transistors), energy storage devices, and photoelectrochemical devices (e.g. catalysts for water splitting). The special issue consists of 8 review articles and 7 original research articles. Among them, 6 articles are related to graphenes and others are related to 2D materials. These articles have been published already as special sections in FlatChem volumes 2–6. Two articles are included in the current issue as well.

I would like to thank all authors who kindly contributed their papers to this issue, the dedicated publisher of Elsevier B.V. (Dr. Greeshma Nair) and the editors of FlatChem (Prof. Lain-Jong Li) for their kind help and co-operation. I hope that this issue provides valuable insights to the researchers to make new breakthroughs in this field.

List of special issue articles

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- [2] Tanmoy Das, Jong-Hyun Ahn, Development of electronic devices based on two-dimensional materials, *FlatChem* 3 (2017) 43–63, <https://doi.org/10.1016/j.flatc.2017.05.001>.
- [3] Jinho Yang, Jae-Ung Lee, Hyeonsik Cheong, Excitation energy dependence of Raman spectra of few-layer WS₂, *FlatChem* 3 (2017) 64–70, <https://doi.org/10.1016/j.flatc.2017.06.001>.
- [4] Jihyun Paek, Joohee Kim, ByeongWan An, Jihun Park, Sangyoon Ji, So-Yun Kim, Jiuk Jang, Youngjin Lee, Young-Geun Park, Eunjin Cho, Subin Jo, Seoyeong Ju, Woon Hyung Cheong, Jang-Ung Park, Stretchable electronic devices using graphene and its hybrid nanostructures, *FlatChem* 3 (2017) 71–91, <https://doi.org/10.1016/j.flatc.2017.06.002>.
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- [12] Meeree Kim, Hee Min Hwang, G. Hwan Park, Hyoyoung Lee, Graphene-based composite electrodes for electrochemical energy storage devices: Recent progress and challenges, *FlatChem* 6 (2017) 48–76, <https://doi.org/10.1016/j.flatc.2017.08.002>.
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