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Synthesis, Manipulation, Properties and Applications of Layered Materials

Guest Editors:

Dr. Camilli Luca

Physics Department, Technical University of Denmark, Kgs. Lyngby, Denmark

lcam@dtu.dk

Prof. Maurizio Passacantando

Università degli Studi dell'Aquila, L'Aquila, Italy

mpassac@aquila.infn.it

Prof. Dr. Antonio Di Bartolomeo

Department of Physics E. R. Caianiello, Università di Salerno, Salerno, Italy

adibartolomeo@unisa.it

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Message from the Guest Editors

Layered materials such as graphite, hexagonal boron nitride, and transition metal dichalcogenides possess a layered structure where the layers interact with each other via a weak van der Waals force. This class of materials exhibits fascinating electronic and optical properties, which are strongly influenced by the number of layers, or by the interaction with substrate and the external environment—for instance, via mechanical strain, or doping.

Furthermore, the individual layers could be thought of as building blocks and thus assembled together to form artificial structures, called van der Waals heterostructures, with unique physical properties.

As a consequence, they have recently received renewed attention because of their potential applications in a number of electronic devices, from sensors to memories, from transistors to solar cells, from batteries and supercapacitors to fuel cells.

We kindly invite you to submit your work for this Special Issue. Experimental studies as well as theoretical investigations are appreciated. Full research papers, communications, and reviews are all welcome.







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Editor-in-Chief

Prof. Dr. Maryam Tabrizian

James McGill Professor, Professor of Biomedical Engineering, Professor of Bioengineering, Professor of Experimental Surgery, Department of Biomedical Engineering, Faculty of Medicine/Faculty of Dentistry, Duff Medical Science Building, 3775 University Street, Montreal, QC, H3A 2B4, Canada

Message from the Editor-in-Chief

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Materials MDPI, St. Alban-Anlage 66 4052 Basel, Switzerland Tel: +41 61 683 77 34 Fax: +41 61 302 89 18 www.mdpi.com mdpi.com/journal/materials materials@mdpi.com ➔@Materials_Mdpi