



## Thin Films and Nanostructures by MOCVD: Fabrication, Characterization and Applications

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### Message from the Guest Editor

Metalorganic Chemical Vapor Deposition (MOCVD) has been attracting continuous interest, being related to the study and fabrication of many devices, ranging from optoelectronics, microelectronics, sensors, and detectors, to energy harvesting. It yields state-of-the-art devices that benefit from high process control, and a large variety of good quality materials (either thin films, multilayers, or low-dimensional structures), which can be grown with excellent doping control, large area deposition, and easy industrial transferability. Moreover, being a chemical deposition technique, MOCVD enables conformal growth with relatively low costs and convenient deposition rates, which is particularly useful when the film coating of complex substrate recesses or nanostructures is required. All these advantages cannot be easily found in other advanced deposition techniques. Indeed, different devices of commercial interest are grown by MOCVD, such as light emitting diodes (LEDs), high-efficiency solar cells, and infrared detectors.

The scope of this Special Issue is to gather different contributions from different areas of MOCVD research activity.





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## Message from the Editorial Board

Now more than ever, research is asked to deliver knowledge and technologies to solve the major challenges faced by our society. The development of new materials and devices for (without the ambition to be exhaustive) energy, health and food technology, together with the need for establishing processes that reduce the impact on critical resources and the environment, is indeed in the spotlight of most contemporary research. Surface science and engineering play a key role in this regard, with an incredible potential in delivering new and deep scientific understanding and technical solutions essential to solve most of the major societal challenges.

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