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Editorial

Special issue on Plasma Processes

The present issue of the European Physical Journal – Applied Physics (EPJ-AP) is dedicated to papers on Plasma Processes, covering a variety of subjects that include the study of advanced plasma sources (including micro-discharges), the characterization of plasmas (using both modeling and experimental diagnostics to analyze fundamental kinetic mechanisms and/or the structure of discharges), and the use of plasmas for surface engineering (employing etching, deposition, sputtering and multi-functional coating techniques implemented with different plasma sources, relating the properties of the processed films to the plasma conditions, and addressing also the influence of dust), keeping in mind forefront applications in the fields of micro- and nanotechnology, bio-medicine, and environment (sensors and catalytic conversion).

These subjects correspond to the list of topics covered by the International Colloquium on Plasma Processes (CIP), a biennial international conference organized under the auspices of the French Vacuum Society, which focuses on the latest developments in plasma processing science and technology. The 18th edition of this event was held in Nantes (France) from 4 to 8 July 2011, and the 26 peer-reviewed papers with this special issue correspond to a selection of different original contributions (invited, oral and poster) to the CIP11.

As Associated Editors of the EPJ-AP, and Guest Editors for this special issue, we are pleased to publish this selection of papers, constituting a well-balanced representation of the topics treated during the conference and providing a comprehensive covering of the main concerns in the field of plasma processes. We would like to thank all the authors and referees for their efforts in preparing and reviewing the manuscripts, within very strict deadlines, as well as the Editorial Office of the EPJ-AP for its helpful assistance in organizing this special issue on Plasma Processes.

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List of papers

18th International Colloquium on Plasma Processes (CIP 2011)