CALL FOR PAPERS

Cluster issue on ‘Spots and patterns on electrodes of gas discharges’

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Cluster issue on ‘Spots and patterns on electrodes of gas discharges’

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Concentration of electrical current onto the surface of electrodes of gas discharges in well-defined patterns, or current spots, is often the rule rather than the exception. These patterns occur on otherwise uniform electrode surfaces, a regime where one might expect a uniform distribution of current over the surface. In some cases, multiple spots may appear, forming beautiful regular patterns and surprising the observer. The appearance of current spots on electrodes is a phenomenon of high scientific interest and significant importance for applications. Plasma Sources Science and Technology is delighted to announce a forthcoming cluster of papers entitled ‘Spots and patterns on electrodes of gas discharges’, to appear in the summer of 2014.

Papers are invited that report on experimental, first-principles theoretical and/or computational investigations on

- all types of electrical discharges, including, for example, dc glow, RF, arc, corona and DBD,
- all classes of electrodes, including bare metal, semiconductor, liquid, dielectric covered metal,
- all varieties of spots and patterns that are self-organized—that is, patterns that are unrelated to non-uniformities of the electrode surface or applied voltage.

Both regular papers and brief communications reporting new experimental, theoretical or computational results are welcome.

You are invited to submit your paper by 17 January 2014. Submissions received after this date will be considered for the journal, but may not be included in the cluster. All submitted papers will be fully refereed to the journal’s usual high standards and corresponding authors whose papers are published in the cluster will receive a complimentary copy. Upon publication, the cluster will be widely promoted to the gas discharge community, ensuring that your work receives maximum visibility.