Your invitation to submit

Plasma Sources Science and Technology is pleased to announce a special issue focusing on electron heating in technological plasmas, to be published in the summer of 2015. In this special issue, we invite original papers on electron heating in different types of technologically relevant low temperature plasmas. Contributions focused on fundamental research as well as applications using experimental, theoretical, and/or computational methods are welcome.

The mechanisms of electron heating in technological plasmas are complex, diverse and not fully understood. However, they are fundamental for generating, sustaining and controlling such discharges. A detailed comprehension is the basis for process control and optimization based on scientific understanding of the plasma physics. This Special Issue is devoted to merging the state of knowledge, gather new ideas from theory and experiment, and bridge the gap between fundamental research and application.

We call for papers on electron heating in different discharge types ranging from DC- to RF- and wave heated plasmas operated in regimes ranging from non-local low pressure to local high pressure conditions including macro- and micro-plasmas as well as magnetized and unmagnetized discharges.

Examples of research topics welcome for this special issue include, but are not limited to:

- Fundamental investigations of electron heating mechanisms in different types of technological low temperature plasmas
- Electron heating in plasmas in multiphase media
- The effect of plasma-surface interactions on the electron heating dynamics
- Diagnostics to investigate electron heating
- Novel techniques to control the electron heating dynamics in technological plasmas
- Novel methods to customize energy distribution functions of different particle species based on controlling the electron heating dynamics
- Process optimization based on understanding and controlling electron heating
- Optimization of medical applications based on controlling electron heating dynamics

Research papers in PSST can be up to 14 pages (at approximately 900 words per page) in length, including space for figures, graphs and tables (figures are equivalent to about 150 words each). We encourage colour figures and multimedia clips for the online version of the special issue, for which there is no charge. As for our regular submissions there will be no page charges.

You are invited to submit your paper by 31 January 2015. Submissions received after this date will be considered for the journal, but may not be included in the special issue. All submitted papers will be fully refereed to the journal’s usual high standards and corresponding authors whose papers are published in the special issue will receive a complimentary copy. Upon publication, the issue will be widely promoted to the low-temperature plasma physics community, ensuring that your work receives maximum visibility.

How to submit your paper

Use our submission facility at http://mc04.manuscriptcentral.com/psst-iop

All submissions should be clearly marked for the ‘Electron-heating in technological plasmas’ special issue. Detailed information about how to submit an article for publication in the journal can be found on the website at www.iop.org/journals/authorsubs