Call for Papers:

“Heavy ion driven fusion (HIF) and high energy density physics (HEDP)” in the journal *Matter and Radiation at Extremes* (MRE).

Dear Colleagues,

*Matter and Radiation at Extremes*, co-published by China Academy of Engineering Physics and Elsevier, is aimed to provide a rapid forum for the dissemination of research articles and review articles in all areas of experimental and theoretical physics on matter and radiation at extreme conditions.


As an important dimension of MRE’s focus, researches on heavy ion fusion and high energy density physics have achieved great progress while facing grand challenges and opportunity recently. To further review the status and stimulate further progress, *Matter and Radiation at Extremes* aims to publish a special issue on heavy ion driven fusion and high energy density physics (HIF&HEDP) in 2017, and thus has invited Prof. Yongtao Zhao, Prof. Shigeo Kawata, and Dr. Peter A. Seidel to be the Guest editors.

- **Guest editors**
  - **Yongtao Zhao** is a distinguished professor at Xi’an Jiaotong University, China since 2015. He is also a Fellow of Institute of Modern Physics (IMP), CAS. He got his PhD degree in the Institute of Modern Physics, Chinese Academy of Sciences in 2006, majored in atomic physics of highly charged ions. He worked as a visiting scholar at GSI, the heavy ion research center in Germany from 2007 to 2009. Currently, his scientific activities are focusing on ion-beam plasma interaction, ultrafast radiography with high energy particle beam, and heavy ion driven high energy density. He has played important roles in scientific organizations, international journals, internal and international conference organizations.
  - **Shigeo Kawata** is a professor at Utsunomiya University, Japan since 1999. He got his doctoral degree in Tokyo Institute of Technology in 1985. He was a research associate in Tokyo Inst. of Tech. Since his graduate student age, he has worked on ion beam inertial fusion and other relating topics including laser particle acceleration and computer assisted scientific simulation environment. He moved to Nagaoka University of Technology as an associate Professor and stayed there until 1999. In his career he has various experiences as a visiting scientist in Forschungszentrum Karlsruhe, Germany, LLNL, Univ. California at Davis, U.S.A., Univ. of Tokyo, Fudan Univ., China, etc. He has also contributed intensively to scientific activities in various organizations, journals, conference organizations and relating education, as well as his university administrative works.
  - **Peter Seidel** is a physicist in ATAP (Accelerator Technology and Applied Physics Division), LBNL (Lawrence Berkeley National Laboratory). He received a BS in Physics from McGill University in 1980 and a PhD in Nuclear Physics in 1984 from The University of Texas at Austin. He worked on numerous pion, electron, proton, and heavy ion scattering experiments at LANL, ANL, SLAC, and Berkeley Lab. After designing and using detectors for heavy ion collisions at the Bevalac, he joined the heavy ion inertial fusion (HIF) research group at Berkeley Lab in 1991. He was the lead physicist of various experiments for HIF drivers and...
for warm dense matter research. He is presently carrying out research with intense ion beams at LBNL. He has contributed a number of international and internal scientific activities including journal editing and conference organization.

- **Topics and scope**
  1) Accelerator physics & technology such as Ion source, Beam transport, Beam neutralization, Beam instability, Beam compression, Beam focusing,
  2) Stopping power and beam interaction with matter
  3) Warm dense matter / high energy density physics based on heavy ion beam,
  4) Heavy ion driven inertial fusion, Heavy ion beam illumination scheme, Fuel target implosion in HIF, HIF reactor system,
  5) Heavy ion beam application in HIF/HEDP research such as proton radiography, heavy ion fast ignition,
  6) Project in HIF & heavy ion beam based HEDP, and relating subjects.

- **Timing**
  Online submission deadline: April 30th, 2017.
  Planned publication date: Winter, 2017.

- **Article type**
  Both review papers and progress letters/full research papers are welcomed.

- **Submission**
  1) All submitted papers must be clearly written in excellent English and contain only original work, which has not been published by or is currently under review for any other journal or conference. A detailed submission guideline is available as “Guide to Authors” at: [http://www.journals.elsevier.com/matter-and-radiation-at-extremes/](http://www.journals.elsevier.com/matter-and-radiation-at-extremes/).
  2) All manuscripts and supplementary material should be submitted through EVISE system, at [https://www.evise.com/profile/#/MRE/login](https://www.evise.com/profile/#/MRE/login).

  **Notice:** Please add “SI-002” before title to indicate that your submission is to this special issue. E.g. (SI-002) XXXX.

- **Publication**
  All paper would be reviewed by two independent reviewers. Once the paper is accepted, it will appear online first (with DOI and citable), later it will be collected and published in the special issue in Summer-Autumn 2017 as we expected.

If you work in this area and have some good work to present, we would like to invite you to join this fabulous issue. We would be grateful if you could indicate whether you would like to contribute to this issue **by the end of January, 2017**, providing an outline of the topic you would like to discuss. Please do not hesitate to contact us if there is anything we can help with.

We are looking forward to hearing from you and the prospect of working with you for this HIF&HEDP special issue!

**Guest Editors:**

- Prof. Yongtao Zhao, Xi'an Jiaotong University, China, [zhaoyongtao@xjtu.edu.cn](mailto:zhaoyongtao@xjtu.edu.cn)
- Prof. Shigeo Kawata, Utsunomiya University, Japan, [kwt@cc.utsunomiya-u.ac.jp](mailto:kwt@cc.utsunomiya-u.ac.jp)
- Dr. Peter Seidl, Lawrence Berkeley National Laboratory, U.S.A., [PASeidl@lbl.gov](mailto:PASeidl@lbl.gov)

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