Progress and prospect

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With a goal of establishing a leading-edge international journal and an influential platform for researchers investigating physical principles, technologies, and applications of the emerging field of high energy density science, we initiated the new journal, Matter and Radiation at Extremes (MRE) in 2016. MRE has been and will be dedicated to report extreme states of matter and radiation and the related science, technology, and applications, including drivers (lasers, pulsed power, accelerators), modeling tools, targets, and diagnostics that are employed to produce, understand, and diagnose these conditions in the laboratory.

From 2016 to 2018, MRE has made very good progress in publishing 85 high quality papers, contributed by physicists and engineers from research groups from major facilities and world leading institutions and universities. The MRE papers published to date have already had over 300 SCI citations and more than 100 000 downloads worldwide. From these MRE papers, one can find new explanations of fundamental physics, innovative concepts and designs for fusion energy research, progress in pulsed power technology, and discoveries in high pressure physics. After having been indexed by DOAJ and SCOPUS, we are very proud to now announce that MRE has reached a new milestone in 2018: being indexed by Emerging Sources Citation Index (ESCI) with all published MRE papers available in the database of the Web of Science. The excellent progress to date is due to the great contributions of all the authors, readers, editors, reviewers, and editorial staff, as well as all supporting organizations and the Elsevier Publishing group. On behalf of the MRE editorial board, we are very grateful to all the friends of MRE and we sincerely appreciate all your continuing contributions and support to MRE!

The three-year contract between MRE and Elsevier ended on December 31, 2018. Starting from January 1, 2019, we are very pleased to announce a new five-year partnership between MRE and AIP Publishing, one of the world’s leading publishers in the physical sciences and a wholly owned not-for-profit subsidiary of the American Institute of Physics (AIP). The new publishing partnership aims to increase the global impact and reach of MRE. We are very excited for this new partnership between MRE and AIP Publishing and look forward to a growing and continued relationship.

AIP Publishing has made its full suite of publishing services available to MRE and carefully designed the MRE journal page on Scitation. With its online submission system, PeerX-Press (PXP), and its professional website (https://aip.scitation.org/journal/mre) for MRE, AIP Publishing supports MRE’s whole working process from submission to publication, and provides considerate, professional, and timely services to authors in the following aspects: the well-designed, easy-to-operate PXP submission system “single blind” peer-review; English language editing for accepted MRE manuscripts; and multi-channel promotion of MRE papers.

Strongly supported by AIP Publishing, MRE has the following goals to ensure high quality and influential publications:

1. Each MRE paper published is peer-reviewed. Associate Editors will solicit submissions for important and novel research of broad interest to the international scientific community in all of the topics associated with matter and radiation at the extremes;
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We believe that the new partnership with AIP Publishing can help to make MRE a great international platform of publishing achievements, sharing significant contributions, exchanging ideas, and inspiring new ideas and innovation in the field of matter and radiation at extremes for physicists in all the developed and emerging countries in the world.

An essential component for the success of MRE is our Editorial Board. MRE has assembled an international Editorial Board, as Fig. 1 shows. This Board will provide guidance for the journal and ensure the highest quality publications. In 2018, we are very happy to have invited eminent physicists to be international Associate Editors for all of the topics to be covered by the journal. They are Dr. Stefan Weber from the Institute of Physics, Academy of Sciences of the Czech Republic, who is in charge of two research groups at the Extreme Light Infrastructure (ELI); Dr. Dave Crandall, who led the Inertial Fusion program from the US Department of Energy; Dr. Sergey Lebedev from Imperial College London, UK, who has developed innovative experimental diagnostic techniques and new pulsed power concepts for inertial confinement fusion and high energy density physics; Dr. Bucur Novac from Loughborough University, a member of the Royal Academy of engineering, working on pulsed power technology for decades with many innovative achievements; and Dr. Ho-Kwang Mao from the Center for High Pressure Science & Technology Advanced Research (HPSTAR), an internationally recognized scientist at the Geophysical Laboratory of the Carnegie Institution for Science. In addition, we have also adjusted the editorial board membership of MRE under the suggestions of our international Associate Editors and with the help of AIP Publishing, to make it more diverse and international. We will continue in our mission to deliver the most valuable and impactful findings of our research community.

MRE will continue to serve its authors and readers in all ways possible. For example, since 2016 when the journal was first launched, MRE supports and organizes the International Conference on Matter and Radiation at Extremes (ICMRE) annually to bring together scientists from all over the world to exchange opinions and discuss the latest achievements in the field of matter and radiation at extreme conditions. ICMRE 2016, ICMRE 2017, and ICMRE 2018 were held successfully in Chengdu, Beijing, and Qingdao, respectively, each with attendance of about 200–300 from more than 10 countries. The 4th International Conference on Matter and Radiation at Extremes (ICMRE) will be held in Hefei, China in May 29–June 2, 2019, co-hosted by the Institute of Fluid Physics of China Academy of Engineering Physics and University of Science and Technology of China. The main topics of the 4th ICMRE include High Pressure Physics and Materials Science, Fundamental Physics...
at Extremes, Extremes Laser- and Particle Beam Fusion, Science and Technology at Extremes based on XFEL, and Fluid Interface Instability at Extremes. As the General Chairs of ICMRE2019, we warmly welcome researchers of the community from all over the world to take part in the 4th ICMRE. We believe it will be a useful and productive event for all people exploring matter and radiation at extremes.

Staying true to its mission, MRE aims to provide an open, inclusive and important platform for the international physics community to motivate scholarly communication, to promote academic achievement, and to provide a forum for deepening physical understanding and extracting novel ideas. We are always here to welcome your important contributions to Matter and Radiation at Extremes.