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# **The 2<sup>nd</sup> Announcement**

## **5<sup>th</sup> International Conference on Matter and Radiation at Extremes (ICMRE 2020)**

**May 25 – 29, 2020**  
**Xi'an, Shaanxi, China**

The 5th International Conference on Matter and Radiation at Extremes (ICMRE 2020) will be held in Xi'an, Shaanxi, China on May 25 – 29, 2020. Supported by the journal Matter and Radiation at Extremes (MRE), ICMRE is a serial conference convened annually since 2016 when MRE was launched. ICMRE 2016, ICMRE 2017, ICMRE 2018 and ICMRE 2019 were held successfully in Chengdu, Beijing, Qingdao and Hefei, respectively. Attendance at ICMRE generally varies from 200 to 300, including international attendees from about 10 countries. The goal of ICMRE is to bring together scientists from all over the world to exchange ideas and discuss latest achievements in the field of matter and radiation at extreme conditions. ICMRE2020, hosted by the Institute of Applied Physics and Computational Mathematics and Shaanxi Normal University, will provide a forum to discuss the latest results of physics, technology and applications in the area of matter and radiation at extremes. We look forward to your participation in the ancient city of Xi'an in 2020!

The details of ICMRE2020 can be explored on the website:

<http://icmre2020.aconf.org>.

The abstract submission and conference registration are now open online. Please download the abstract template on the website and upload the abstract to complete the submission. Presentations and papers will be welcomed on theoretical, computational, and experimental research on the following topics:

- Fundamental Physics at Extremes
  - Atomic physics
  - Quantum electrodynamics
  - Nuclear physics with lasers
  - High-field laser-matter interaction
- Laser and Particle Beam Fusion
  - Laser fusion
  - Plasma optics
  - Laser-plasma interaction
  - Hydrodynamic instability

- Magnetized plasmas
- Laser-driven compact neutron sources and its applications
- Magnetic Confinement/Driven Fusion
  - Spherical Tokmak
  - Advanced stellarator configuration
  - Plasma-wall interaction
  - Toroidal/linear configurations
  - Z-pinch
  - Magnetically assisted inertial confinement fusion
- High Energy Density Physics
  - Laboratory astrophysics
  - Radiation by plasmas
  - Transport phenomena
  - Emission and absorption of X-ray radiation from laser-plasmas

### **Satellite workshop**

Title: Kinetic and magnetic field workshop

Chairs: Vladimir Tikhonchuk, Stefan Weber

Date: May 25<sup>th</sup>, 2020

### **Important Dates**

Abstract submission deadline: Feb. 29<sup>th</sup>, 2020

Registration date: May 25<sup>th</sup>, 2020

Conference starting date: May 26<sup>th</sup>, 2020

### **Registration Fee**

Regular: ¥2,000 RMB

Student/Retired Scholar/Companion: ¥1,000 RMB

### **Awards**

- **Young Scientist Award**
  - The MRE Young Scientist Award winner receives
    - A trophy and a certificate;
    - Cash prize of ¥10,000 RMB;
    - A formal invitation to publish on Matter and Radiation at Extremes.
  - Eligibility Criteria
    - The applicant should be younger than 35 years old on Jan. 1, 2020;
    - The applicant should be the presenting author (first or corresponding

author) of original research which has not been published and is not under consideration for publication elsewhere by the end of ICMRE2020.

-The theme of the research work should be within the scope of ICMRE2020 conference.

- The applicant must submit an extended informative abstract on the original research (2000-3000 words, including representative figures) in DOC (DOCX) or PDF format on <https://icmre2020.aconf.org/>. The online submission system is open now. Please go to "Submit Paper" and then check "Young Scientist Award" and follow the instructions in the navigator.

- **Best Poster Award**

Any contributors for poster presentation are welcome to apply for the Best Poster Award. Please remember to select the checkbox of "Best Poster Award" when submitting the abstract.

### **Call for Papers**

Supporting journal ***Matter and Radiation at Extremes (MRE)*** is open for submission on <https://mre.peerx-press.org/>.

Access for detailed information about MRE:

<https://aip.scitation.org/journal/mre>

### **Hosts**

Institute of Applied Physics and Computational Mathematics, Beijing, China

Shaanxi Normal University, China

### **Co-Hosts**

Matter and Radiation at Extremes

Institute of Fluid Physics, China Academy of Engineering Physics, China

Laser Fusion Research Center, China Academy of Engineering Physics, China

### **Chairs**

**General Chairs:** Weiyan Zhang, Jean-Luc Miquel

**Local Chairs:** Jianguo Wang, Shixian Qu

### **International Technical Committee**

**Chairs:** Stefan Weber

**Members (in alphabetic order):** Anabella Araudo, Dimitri Batani, Robert Bingham, E.M. Campbell, Gilbert W. Collins, David Crandall, Ning Ding, Yongkun Ding, Dieter Hoffmann, Javier Honrubia, Ke Lan, Sergey Lebedev, Yutong Li, Kunioki Mima, Masakatsu Murakami, Martin Peng, Caterina Riconda, Kazuo Tanaka, Vladimir

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Tikhonchuk, M. Vranic, Jianguo Wang, Yuhong Xu, Yongtao Zhao

### **Local Organizing Committee**

**Chair:** Suhua Wei

**Members (in alphabetic order):** Ying Huang, Qianqian Li, Tianhui Li, Hao Yang, Songbin Zhang

### **Contact**

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## Matter and Radiation at Extremes

In recent years, significant scientific advances have been made in the field of matter and radiation at extremes. Matter and Radiation at Extremes (MRE) is committed to the publication of original research and comprehensive and in-depth review papers in all areas of experimental and theoretical physics on matter and radiation at extremes. It is a peer-reviewed, fully open-access, bimonthly journal. Up to now, MRE has published more than 125 quality papers, with more than 600 citations and over 170,000 downloads worldwide. It has been indexed in SCIE, WoS, Scopus and DOAJ databases. Beginning from 2019, MRE is co-published by AIP Publishing to increase its global impact and reach.

Learn more about MRE on its homepage: <http://mre.aip.org>.



The image displays the Matter and Radiation at Extremes (MRE) journal cover and a grid of six article thumbnails. The cover features the MRE logo and the title "Matter and Radiation at Extremes" in a large, stylized font, with the URL <http://mre.aip.org/> below it. The thumbnails show various scientific articles with titles such as "Calculated Gd-enhanced electron spectra features from a periodic channel driven by 15-PM lasers", "Researches on experimental and theory approaches to X-ray diffraction spectroscopy", "Challenges of a ray microtechnology in investigation of matter under extreme conditions", "High-resolution X-ray spectroscopy and quantum optics in the extreme ultraviolet", "Experimental study of electron-positron pair production in the extreme ultraviolet", "Using artificial intelligence to investigate hydrodynamic instabilities in convergent geometry", and "Matter and Radiation at Extremes".