

Special Issue for Plenary and Invited Papers From the 18th China National Conference on Plasma Science and Technology

WE are pleased to introduce the Special Issue for Plenary and Invited Papers from the 18th China National Conference on Plasma Science and Technology (CNCPT). The associated conference, which all the guest editors had the honor to attend, took place on July 26, 2017–July 29, 2017, in Xi’an, Shaanxi, China. The conference General Chair was Prof. C. L. Liu, Xi’an Jiaotong University, Xi’an, and the Technical Program Chair was Prof. C. Chang, Xi’an Jiaotong University. A total of 12 plenary talks, 36 invited talks, 159 oral talks, and 312 posters provided an excellent platform for academic exchanges for researchers to enhance scientific communication, and further promote the research development of the Chinese domestic plasma science and technology. While the conference generally used the Chinese language, several of the opening speakers presented their talks in English, and several presented both in English and Chinese, mainly for the benefit of our English-speaking contingent. The conference was attended by high-level Chinese faculty and scientists, as well as a large contingent of students. The topics spanned a broad range of areas, from low-temperature plasmas to magnetic fusion, showing the full breadth of plasma physics in China.

The plenary talks included J. Li, China Academician, Institute of Plasma Physics, Chinese Academy of Sciences, “China’s Fusion Engineering Experiment Reactor—Current Situation and Future.” Prof. J. Verboncoeur from Michigan State University, East Lansing, MI, USA, presented “A Brief History of the Particle Simulation of Plasmas.” The additional ten plenary talks related to low-temperature plasma physics, high-temperature plasmas, fusion plasma of the HL-2A tokamak and EAST, microwave-driven plasmas, lightning plasma, astrophysics plasmas, plasmas in surface engineering, and Thompson scattering for plasma diagnostic. S. Gold, retired from the U.S. Naval Research Laboratory, Washington, DC, USA, gave a lecture on “Study of Multipactor in X-Band Dielectric-Loaded Accelerating Structures.” M. Pu, the Officer from the Natural Science Foundation of China, gave a seminar about the status of the Physical II Disciplinary Science Fund.

The CNCPT is a biannual series engaging the broad plasma community of China. The series originated in 1980, with the first three meetings held in Beijing, China. The 4th conference was held in Shanghai, China, in 1987, 5th in Dalian, China, in 1989, 6th in Nanjing, China, in 1992, 7th in Hefei, China, in 1995, 8th in Beijing, in 1997, 9th in Dalian, in 1999, 10th in Changsha, China, in 2001, 11th in

Hefei, in 2003, 12th in Shanghai, in 2005, 13th in Chengdu, China, in 2007, 14th in Dalian, in 2009, 15th in Huangshan, China, in 2011, 16th in Shanghai, in 2013, and 17th in Chengdu, in 2015.

This was the 18th meeting of the CNCPT. It was jointly sponsored by the Plasma Science and Technology Committee of the China Mechanics Society, the Plasma Physics Committee of the China Physics Society, the Fusion and Plasma Physics Committee of the China Nuclear Society, and the High Energy Physics Committee of the China Physics Society. The typical meeting size is about 400 attendees, but additional exposure and inclusion of a small number of international authors increased attendance to over 700 this year, indeed overwhelming the plenary venue of 550 and requiring a simulcast to an adjoining room for about 150.

We invited plenary and invited speakers, as well as the authors of presentations deemed outstanding by the conference chair and guest editors, to submit papers. The conference included 32 plenary and invited papers. The manuscripts were reviewed by at least two reviewers following the standard IEEE review process, who made recommendations to the guest editors. The Special Issue received 28 original manuscripts, with 21 received as revisions and 15 accepted. Nine manuscripts remain in process as of this writing, with four awaiting final proofs, and five still in review; those accepted will appear in a future regular issue of TRANSACTIONS ON PLASMA SCIENCE. We hope you enjoy the papers of the Special Issue, and that you find them useful in furthering your research!

The guest editors are grateful to S. Gitomer, IEEE TRANSACTIONS ON PLASMA SCIENCE Editor in Chief, and the IEEE Publications Team for their patience and support in building this special issue.

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