GEC20-2020-000202

Abstract for an Invited Paper for the GEC20 Meeting of the American Physical Society

Plasma Science 2020 Decadal Survey: Overview and Opportunities for the Low Temperature Plasma Community¹ MARK J. KUSHNER, Univ. of Michigan

The Board on Physics and Astronomy of the National Academies of Science, Engineering and Medicine (NASEM) conducts decadal surveys of the major fields of physics. The decadal surveys summarize progress over the past 10 years, anticipate science challenges and opportunities for the coming 10 years, and make policy recommendations for US Federal agencies. Although the policy recommendations are targeted to US agencies, the science findings, challenges and technical recommendations are internationally relevant. Plasma 2020 is the fourth decadal survey for plasma physics conducted by NASEM whose prepublication report was released to the public in late May 2020. The report, *Plasma Science: Enabling Technology, Sustainability, Security, and Exploration* [1] discusses plasma science accomplishments and challenges in basic plasma science, laser-plasma interactions, high energy density physics, magnetic fusion energy, low temperature plasmas and space and astrophysical plasmas. The report highlights opportunities for interagency and interdisciplinary collaborations to meet these challenges. An overview of the report will be given with emphasis on opportunities for the low temperature plasma community. [1] https://www.nap.edu/catalog/25802/plasma-science-enabling-technology-sustainability-security-and-exploration

¹The author acknowledges Plasma 2020 Co-Chair Gary P. Zank, NASEM project leader Christopher Jones and the Plasma 2020 Committee. The Decadal Survey was funded by the National Science Foundation, Department of Energy, Office of Naval Research and Air Force Office of Scientific Research.