



sensors



Special Issue Reprint

Plasma Diagnostics

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Plasma Science and Engineering is a multidisciplinary area encompassing some of the most exciting fundamental applied research themes in today's scientific landscape, having an extraordinarily broad impact on science, technology and industry. The measurement of the parameters of plasmas, usually termed as plasma diagnostics, is a key challenge in all of these applications, both for understanding the basic principles and, in many cases, for the optimization and control of processes. The aim of this Special Issue is to provide the reader a view of some of the wide variety of available plasma diagnostics approaches. This reprint covers several methods, instruments, and experimental techniques used to measure the properties of plasma, such as diagnostics for magnetic confinement fusion, beam plasmas and inertial fusion, low-temperature and industrial plasmas, and basic and astrophysical plasmas. In some fields of plasma research, e.g. future fusion reactors, such as ITER and DEMO, there will be a need to measure a wide range of plasma parameters in extreme temperature, neutron, and gamma flux conditions while providing measurements with adequate reliability and long-term stability. The articles in this Special Issue will address some of the challenges faced and the multidisciplinary approaches required while designing such diagnostics.



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