

**PiAI Seminar Series: Physics informed AI in Plasma Science**  
**9:30-10:30, 14 November 2022 (CET)**  
**17:30-18:30, 14 November 2022 (JST)**  
**Web Seminar**

Atomic and Molecular data for Plasma Science:  
What we know and what we need.

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A wealth of atomic and molecular data is needed for the many different facets of plasma science from the collision cross sections needed to model plasmas to spectroscopic data to provide in-situ diagnostics, data on surface interactions and, for atmospheric pressure discharges, data on clusters. The collection, compilation, validation and archiving of such data remains a major challenge to the community. In this talk I will briefly review the current status of our knowledge of the atomic and molecular data needed for plasma science whilst discussing how much needed data may be compiled in future. The challenge for generating the big databases needed for the myriad of plasma applications will be discussed and how the community may meet this challenge addressed.