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Fusion Materials and Codes and Standards for Fusion Energy

One of the largest factors severely limiting the anticipated pace to realize fusion on the grid is the development of a set of basic fusion materials, qualified and validated in expensive irradiation campaigns. Initiated by an international working group, Clean Air Task Force's "Material Database for Fusion" (MatDB4Fusion) aims to collect all kinds of material properties data which are relevant for fusion device design, supported by many public and private entities from different countries. It shall act as a single reference for all design approaches, assess data gaps and improve focus of experimental campaigns, accelerate creation of codes and standards and provide sufficient data for machine learning solutions. This effort is coupled with an integrated involvement in the global efforts to develop codes and standards for fusion energy. Clean Air Task Force will present a summary of the global efforts currently underway in this space and its global involvement in the different efforts –and like our materials efforts, making this information publicly available with the goal of decreasing the timeline to commercial fusion energy.

Technical Categories Addressed

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