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The Design of Raw Data Management System for Plasma Surface Reaction Modeling and Simulation JUN-HYOUNG PARK, WON-SEOK CHANG, MI-YOUNG SONG, National Fusion Research Institute, PLASMA FUNDAMENTAL TECHNOLOGY RESEARCH TEAM — Plasma-based process technology is an important technology in semiconductor manufacturing process. By using the data of the surface reaction utilizing the plasma chemical reaction, it is possible to control the gas mixing ratio or the discharge variable necessary for the process and the material characteristics. In this method, the yield of semiconductors can be improved and highly precise processing becomes possible. In order to apply it not only to the semiconductor field but also to various industries and research, experiments on multiple plasma surface reactions are being conducted. In particular, physical and chemical analysis is necessary to solve the problem of process yield and improvement of yield of semiconductor process. However, basic plasma surface reaction data necessary for related simulation and modeling is not managed / provided efficiently. DCPD of the NFRI provides research data such as plasma collision and thermodynamics to industries and researchers as a data center that collects and disseminates experimental / research data on plasma physical properties. We are trying to design a system that can manage and provide related experiments and research data to provide data related to plasma surface reactions via database systems in the data center.

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