

Abstract Submitted  
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**QDB: Validated Plasma Chemistries Database** SARA RAHIMI, Quantemol Ltd, JAMES HAMILTON, CHRISTIAN HILL, JONATHAN TENNYSON, University College London, UCL TEAM — One of most challenging recurring problems when modelling plasmas is the lack of data. This lack of complete and validated datasets hinders research on plasma processes and curbs development of industrial Applications [1]. We will describe the QDB project which aims to fill this missing link by provide a platform for exchange and validation of chemistry datasets. The database will collate published data on both electron scattering and heavy particle reactions and also facilitates and encourages peer-to-peer data sharing by its users. This data platform is rigorously supported by the validation methodical validation of the datasetsan automated chemistry generator employed; this methodology identifies missing reactions in chemistries which although important are currently unreported in the literature and employs mathematical methods to analyze the importance of these chemistries. Gaps in the datasets are filled using in house theoretical methods.

[1].J. Kushner &k. Bartschat (2016) proc. Nat. Acad. Sci. (In press)

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