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[Poster]

The confined molecular systems and astrophysical models

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Abstract: The importance of computational chemistry techniques for examining the dynamics and interactions of molecules enclosed in larger structures has increased over the last few decades (Srećković et al. 2020, Albert et al. 2020). Despite their vast scale, molecular clouds play an important but little understood role in confined systems (Reis et al. 2022). There are currently a few hundred molecular species known to exist in interstellar space, ranging from diatomic to massive anions, cations, and neutrals (see, e.g. de Lara-Castells and Hauser 2020, Roesky & Mandel 2010). Interstellar radiation is scattered and absorbed into molecular clouds and molecules can resist

photodissociation and/or photoionization (Vujčić et al. 2023). Therefore, it is essential to investigate both radiative and collisional mechanisms.

Keywords: A&M data, Molecular ions, Molecular clouds, Confined systems

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