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【613】H2 decoration of alkali-metal-doped PAH's using highly charged helium nano droplets

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Building on our recent report on the production of stable, highly charged droplets of superfluid helium, a new experimental method was designed to investigate chemical reactions in the sub-kelvin environment with a significantly higher ion yield compared to previous setups. We demonstrate a novel method of softly ionizing dopant molecules by proton transfer, while largely preventing fragmentation, even for notoriously delicate molecules. Recent measurements indicate promising results while studying the influence of sodium atoms doped onto PAHs on their ability to reversibly attach H2 molecules.

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