

Abstract Submitted  
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**Sieving hydrogen based on its high compressibility** HANGYAN CHEN, DEYAN SUN, Department of Physics, East China Normal University, Shanghai, China, XINGAO GONG, Department of Physics, Fudan University, Shanghai, China, ZHIFENG LIU, Department of Chemistry and Center for Scientific Modeling and Computation, Chinese University of Hong Kong, Hong Kong, China — Based on carbon nanotube intramolecular junction and a C60, a molecular sieve for hydrogen is presented. The small interspace between C60 and junction provides a size changeable channel for the permselectivity of hydrogen while blocking Ne and Ar. The sieving mechanism is due to the high compressibility of hydrogen.

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