

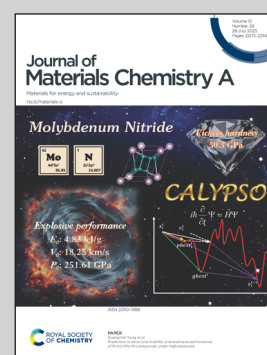
Highlighting a study on hydrogen storage materials by Dr. Naoki Uchiyama and Dr. Daigo Miyajima's research group at RIKEN BZP, Dr. Satoshi Wada's research group at RIKEN RAP, and Prof. Hirotomo Nishihara's laboratory at Tohoku University.

Densification of cellulose acetate-derived porous carbons for enhanced volumetric hydrogen adsorption performance

High-density porous carbon pellets were produced *via* high-pressure compression of cellulose acetate-derived carbon powders, activated under optimized KOH conditions. These pellets exhibited a high volumetric hydrogen storage capacity of 20 g-H₂/L at -196 °C and 1 bar. The study demonstrates that cellulose acetate-derived carbon pellets can achieve an enhanced volumetric hydrogen storage density by optimizing the pore ratio, which favors hydrogen adsorption.

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