



Showcasing research from the laboratories of Professor Yan Qing and Professor Yiqiang Wu, College of Materials Science and Technology, Central South University of Forestry and Technology, Changsha, China.

Synchronously reconfiguring closed pore and interlayer spacing of wood-derived hard carbon *via* hot-pressing for advanced sodium-ion batteries

A hot-press densification strategy was developed to enhance the sodium storage performance of carbonized wood fiber for sodium-ion batteries. This method optimizes the pore structure and microcrystalline features, improving initial Coulombic efficiency and platform capacity. Molecular dynamics simulations revealed that defect-induced interlayer expansion and increased sp^2 carbon content drive this enhancement. This approach is simple, cost-effective, and adaptable to other biomass sources for advanced energy storage applications.

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See Yan Qing, Yiqiang Wu *et al.*, *Green Chem.*, 2025, **27**, 8143.