

Abstract Submitted
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Nanofabricated cells for confined ^3He NIKOLAY ZHELEV, ROBERT BENNETT, ROB ILIC, JEEVAK PARPIA, Cornell University, LEV LEVITIN, ANDREW CASEY, JOHN SAUNDERS, Royal Holloway University London — We describe methods for fabrication of Silicon-Glass and all-silicon cells with a height specified to be between 100nm and 1100nm, and with areas on the order of $\text{cm} \times \text{cm}$. These cells need to meet different requirements, including pressure capability to 30 bar with minimal distortion, and surface roughness which can be characterized and modified as needed to alter the transport characteristics of the confined ^3He . The cells are suitable for NMR and Torsion Oscillator measurements on the superfluid phases of ^3He .

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