

## **Supplementary Information**

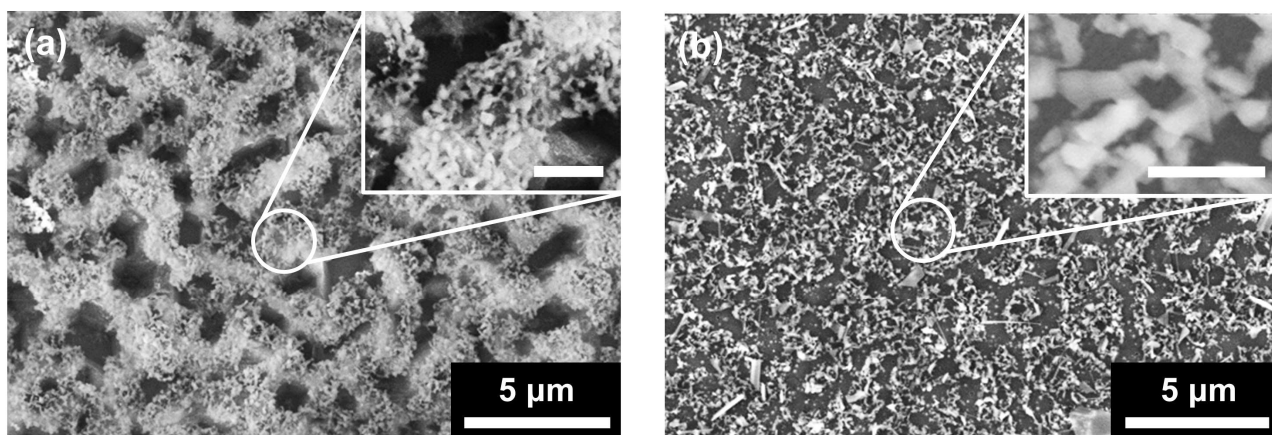
# **A Novel Route to High-Quality Graphene Quantum Dots by Hydrogen-Assisted Pyrolysis of Silicon Carbide**

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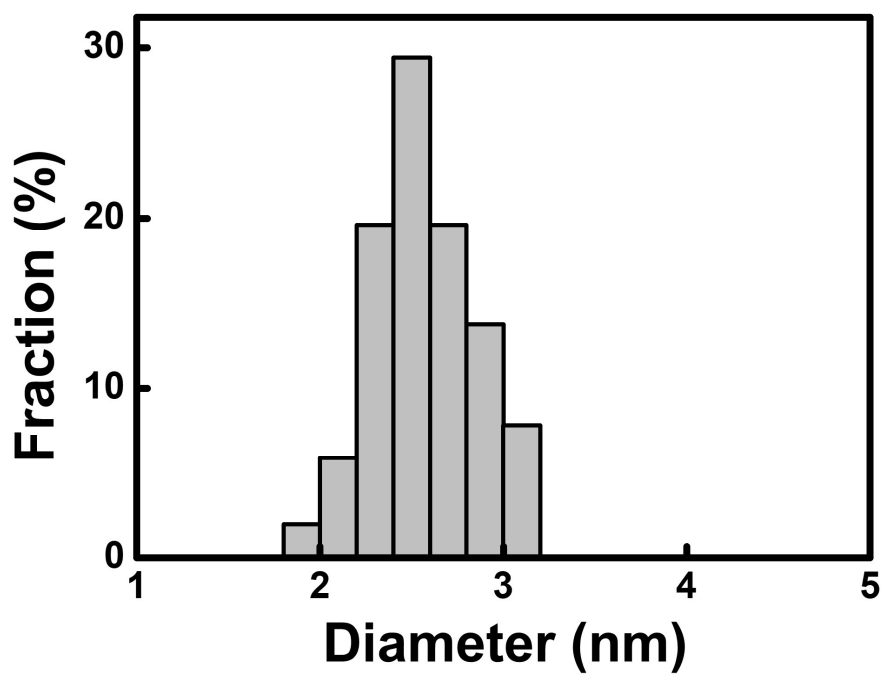
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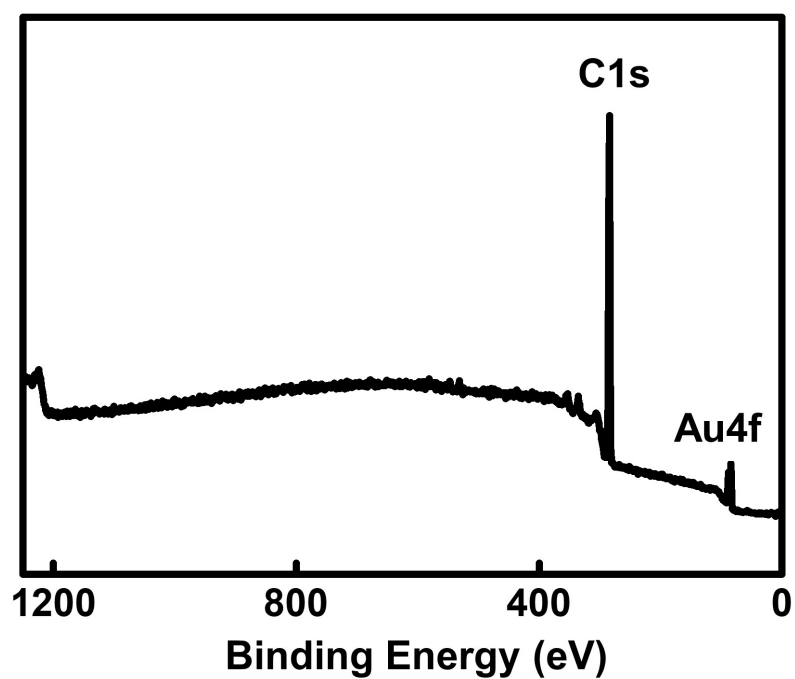
**KEYWORDS:** graphene quantum dots; silicon carbide; hydrogen-assisted pyrolysis; high-quality



**Figure S1.** FE-SEM image of GQDs on SiC plate after annealed at 1500 °C with various operating hydrogen etching gas pressure. The operating pressure was (a) 120 mTorr (inset scale bar is 1  $\mu\text{m}$ ) and (b) 160 mTorr (inset scale bar is 1  $\mu\text{m}$ ).



**Figure S2.** Size distribution of fabricated GQDs.



**Figure S3.** X-ray photoelectron spectroscopy (XPS) survey spectrum of the fabricated high-quality GQDs.