

Supporting information

Highly Efficient Ratiometric Nanothermometer based on Colloidal Carbon

Quantum Dots

Yi Han¹, Yanran Liu¹, Haiguang Zhao^{2, *}, Alberto Vomiero^{3,4, *}, and Ronggui Li^{5, *}

¹School of basic medicine, Qingdao University, No. 308 Ningxia Road, Qingdao 266071, PR China

²State Key Laboratory of Bio-Fibers and Eco-Textiles & College of Physics, Qingdao University, No. 308 Ningxia Road, Qingdao 266071, PR China

³Division of Materials Science, Department of Engineering Sciences and Mathematics, Luleå University of Technology, 971 87 Luleå, Sweden

⁴Department of Molecular Science and Nano Systems, Ca' Foscari University of Venice Via Torino 155, 30172 Venezia Mestre, Italy

⁵College of Life Sciences, Qingdao University, No. 308 Ningxia Road, Qingdao 266071, PR China

*Correspondence: hgzhao@qdu.edu.cn; Alberto.vomiero@ltu.se; lrg@qdu.edu.cn

Supporting figures

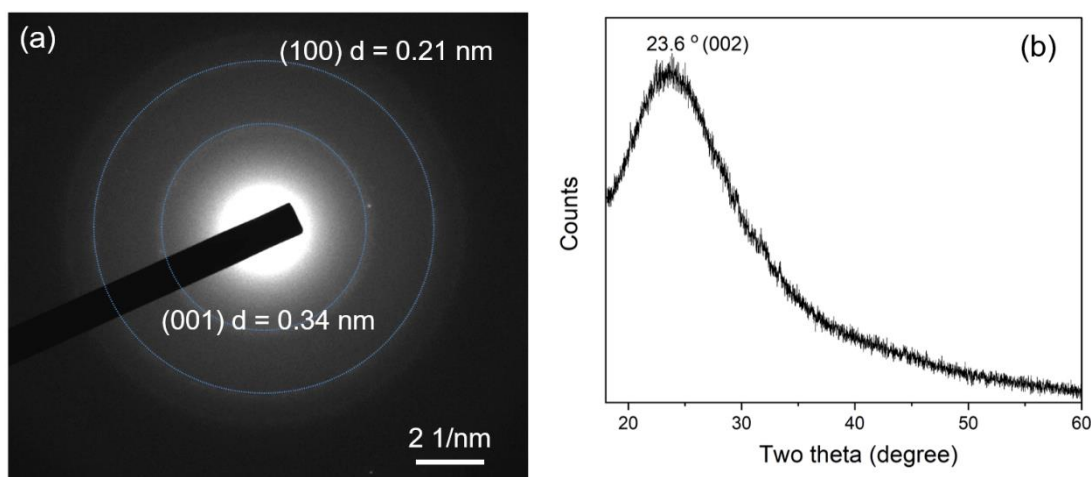


Fig. S1. SAED image (a) and powder XRD spectrum (b) of the C-dots capped with

OH group.

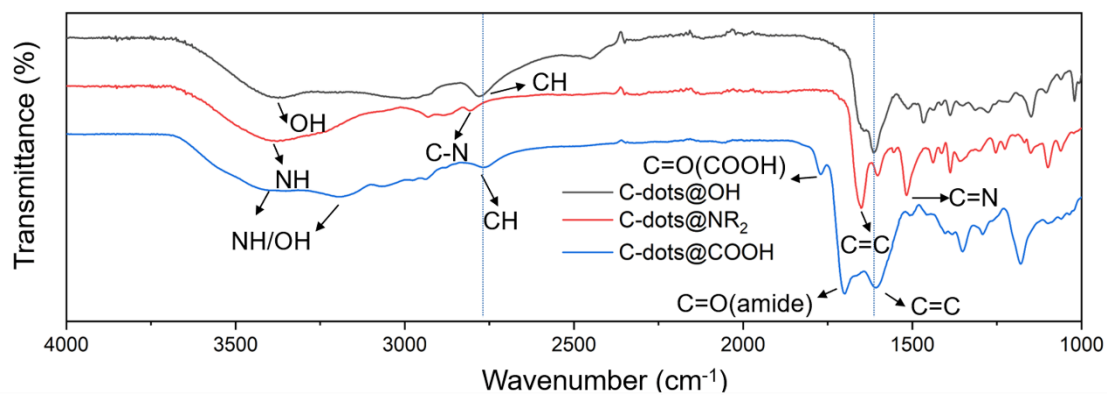


Fig. S2. FT-IR spectra of C-dots with different surface groups.

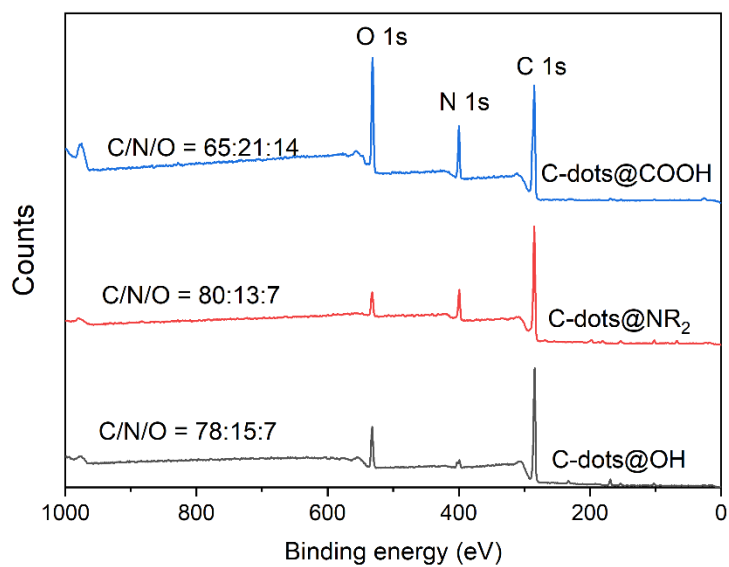


Fig. S3. XPS survey spectra of C-dots with different surface groups.

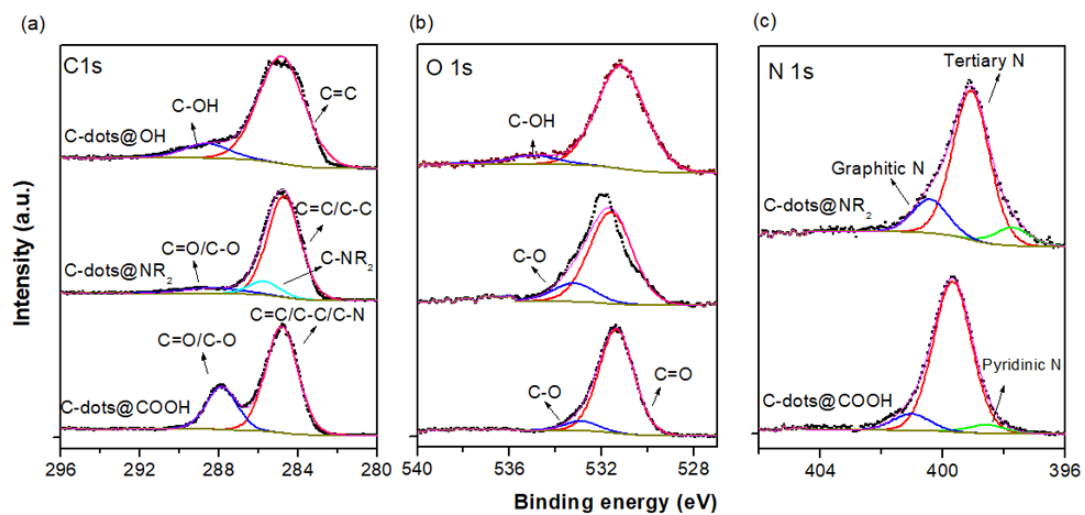


Fig. S4. High resolution (a) C1s, (b) O1s and N1s XPS spectra of C-dots with different surface groups.