

Supplementary Materials

Improved Method for Preparing Nanospheres from Pomelo Peel to Achieve High Graphitization at a Low Temperature

Lingdong Zeng ¹, Youbin Wang ¹, Yixuan Guo ¹, Xiang Dai ¹, Liu Chen ¹, Chunlin He ¹, Nguyen Thi Hong Nhun ¹, Yuezhou Wei ², Gjergj Dodbiba ³ and Toyohisa Fujita ^{1,4,*}

¹ School of Resources, Environment and Materials, Guangxi University, Nanning 530004, PR China; ldzeng2020@163.com (L.Z.); wangyoubin@gxu.edu.cn (Y.W.); a406510695@163.com (Y.G.); daixiang169@163.com (X.D.); chenliu@st.gxu.edu.cn (L.C.); helink1900@126.com (C.H.); hnhung_2912@yahoo.com (N.T.H.N.)

² School of Nuclear Science and Technology, University of South China, Hengyang 421001, China; yzwei@gxu.edu.cn

³ Graduate School of Engineering, The University of Tokyo, Bunkyo 113-8656, Japan; dodbiba@g.ecc.u-tokyo.ac.jp

⁴ School of Chemistry and Chemical Engineering, Guangxi University, Nanning 530004, China

* Correspondence: fujitatoyohisa@gxu.edu.cn

Citation: Zeng, L.; Wang, Y.; Guo, Y.; Dai, X.; Chen, L.; He, C.; Nhun, N.T.H.; Wei, Y.; Dodbiba, G.; Fujita, T. Improved Method for Preparing Nanospheres from Pomelo Peel to Achieve High Graphitization at a Low Temperature. *Crystals* **2022**, *12*, 403. <https://doi.org/10.3390/cryst12030403>

Academic Editor: Jolanta Prywer

Received: 27 February 2022

Accepted: 15 March 2022

Published: 16 March 2022

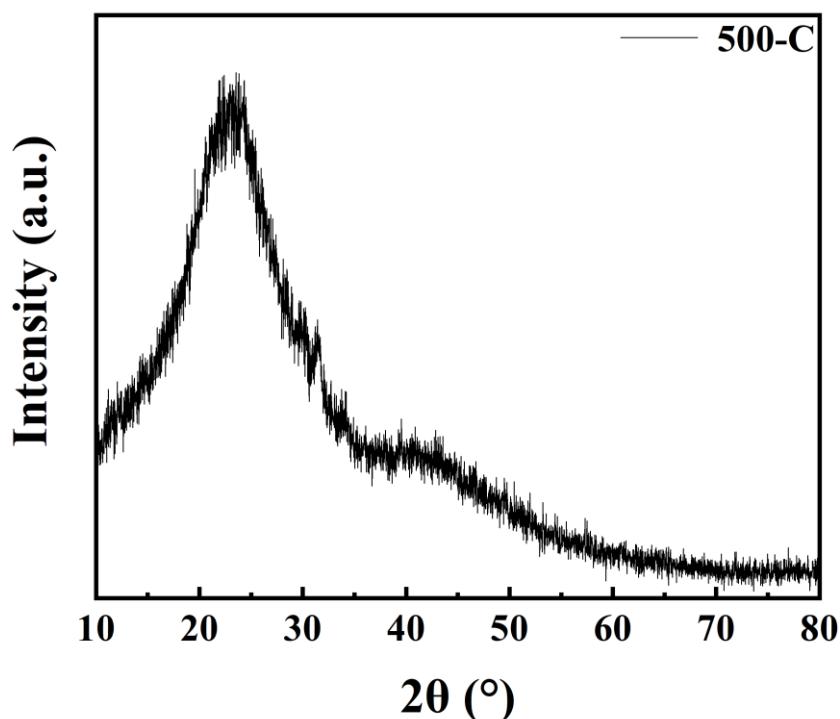
Publisher's Note: MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



Copyright: © 2022 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

Table S1. Sample synthesis method and renaming.

| Sample | Rename |
|---------------------|--------|
| 500°C-Carbonization | 500-C |
| 750°C-Method 1 | 750-1 |
| 800°C- Method 1 | 800-1 |
| 900°C- Method 1 | 900-1 |
| 750°C- Method 2 | 750-2 |
| 800°C- Method 2 | 800-2 |
| 900°C- Method 2 | 900-2 |

**Figure S1.** XRD pattern of carbonization at 500°C.**Table S2.** Cumulative pore volume and area of micropores for the sample.

| Sample | Cumulative Pore Volume (cm³/g) | Cumulative Pore Area (m²/g) |
|--------|-----------------------------------|-----------------------------|
| 750-1 | 0.5358 | 226.752 |
| 800-1 | 0.6988 | 292.34 |
| 900-1 | 0.6755 | 250.352 |
| 750-2 | 0.5321 | 119.134 |
| 800-2 | 0.5545 | 126.202 |
| 900-2 | 0.58 | 143.702 |

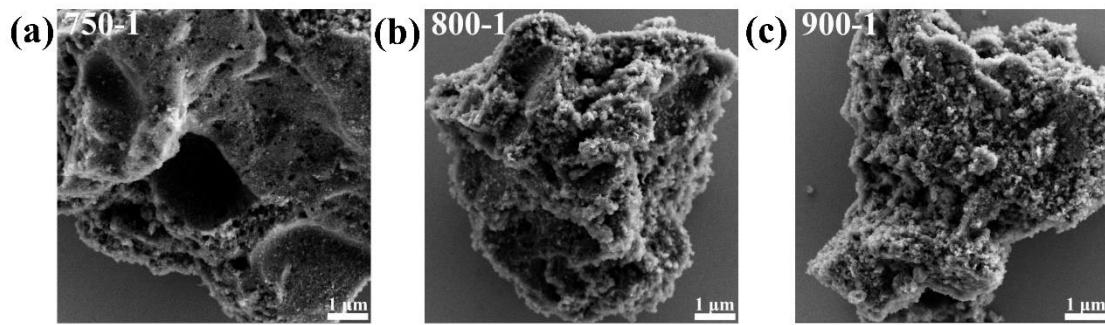


Figure S2. (a-c) SEM images of 750-1, 800-1, 900-1;.

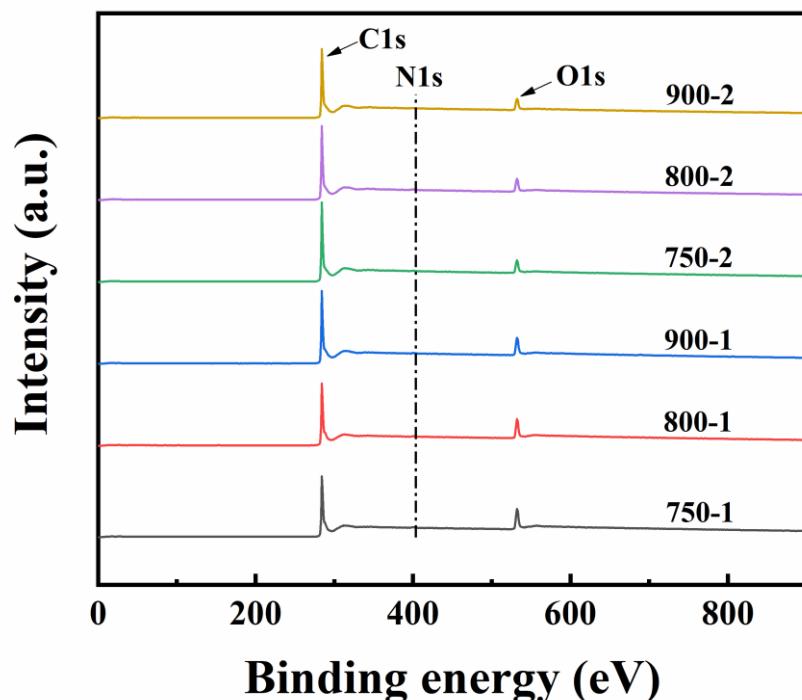


Figure S3. XPS wide scan spectroscopy of the samples.