

## **Supporting Information**

### **Fabrication of hierarchical lignin-based carbon through direct high-temperature pyrolysis and its electrochemical application**

Rui Lou<sup>a\*</sup>, Jie Tian<sup>a</sup>, Yanan Zhang<sup>b</sup>, Wei Chen<sup>a\*\*</sup>

*<sup>a</sup> College of Mechanical and Electronic Engineering, Shaanxi University of Science and Technology, Xi'an, 710021, PR China*

*<sup>b</sup> Shaanxi Key Laboratory of Chemical Additives for Industry, College of Chemistry & Chemical Engineering, Shaanxi University of Science and Technology, Xi'an, 710021, PR China*

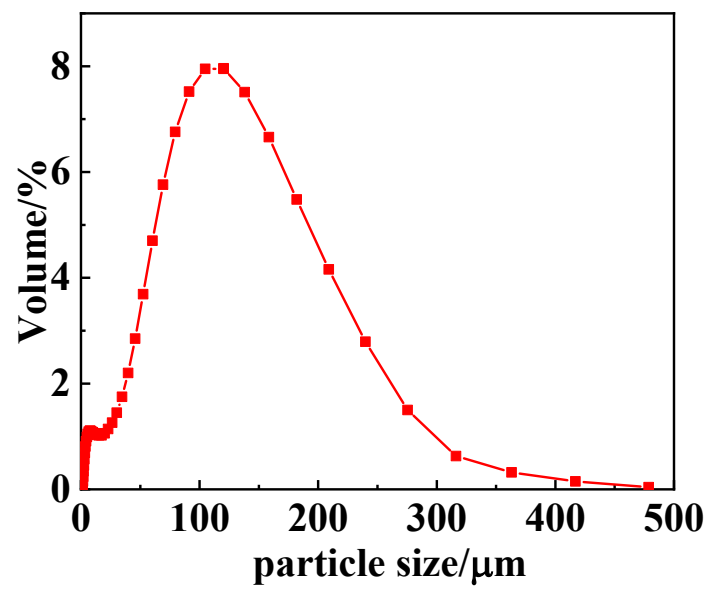
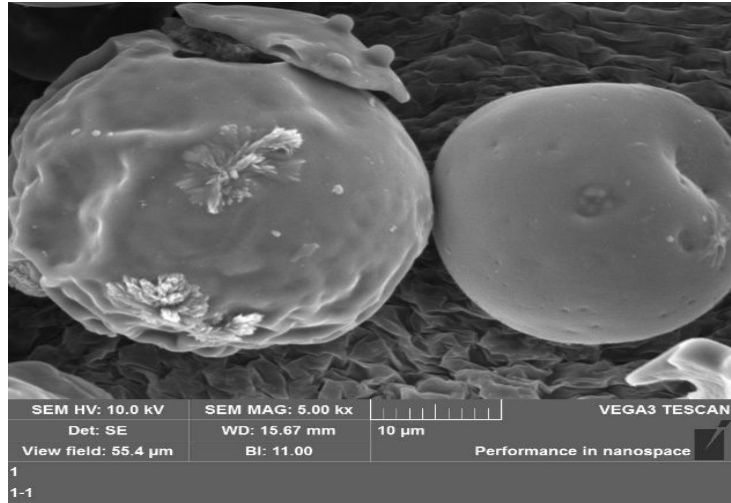
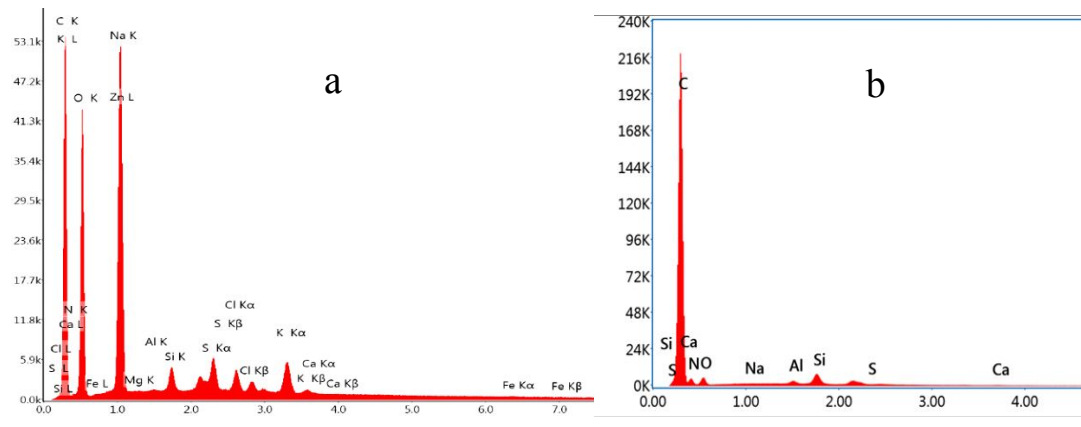


Figure S1. Particle size distribution of AL



**Figure S2. Microtopography image of AL by SEM**



**Figure S3. Elemental compositions of AL (a) and ALC (b) by SEM-EDS**