## **Supporting information**

## Nitrogen-doped micro-nano carbon sphere with multi-scale pore structure obtained from interpenetrating polymer networks for electrochemical capacitor

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This supporting information includes: Scheme S1, Scheme S2, Figure S1, Figure S2, and Table S1



Scheme S1. Formation mechanism of (I) polymer network of IPN.



Scheme S2. Formation mechanism of (II) polymer network of IPN.



**Table S1** Parameters determined by Raman spectrum of N-CS-IPN-2, N-CS-IPN-3 and N-CS-IPN-4.

Sample -	Peak position (cm <sup>-1</sup> )		Peak area		$I_D/I_G$	L <sub>a</sub> (nm)
	D	G	D	G		
N-CS-IPN-2	1353	1583	149685	96273	1.55	2.79
N-CS-IPN-3	1353	1589	1018031	635152	1.60	2.71
N-CS-IPN-4	1353	1593	896210	527683	1.69	2.56



**Figure S2.** HRTEM image of (a) N-CS-IPN-2, (b) N-CS-IPN-3, and (c) N-CS-IPN-4, and the electron diffraction pattern (shown as an inset).