Supplementary Information

Figure 1S. The quasi-elastic neutron scattering data of bulk BPM. The self-intermediate scattering function measured at different temperatures (a), fitting parameter $H_1(Q,T)$ (b) and $H_2(Q,T)$ (c) as a function of $Q$ at different temperatures and temperature dependence of fitting parameter $B_1(T)$ (d).

Figure 2S. The $Q$ dependence of fitting parameter $H_2(Q,T)$ for BPM confined in carbon pores (39±1 Å) (a), carbon pores (56±1 Å) (b), silica pores (40±1 Å) (c) and silica pores (60±1 Å) (d) at different temperatures.
Figure 3S. The temperature dependence of fitting parameter $\tau_\beta(T)$ for BPM confined in carbon pores (39±1 Å and 56±1 Å) and in silica pores (40±1 Å and 60±1 Å) at different temperatures.