Supporting Information

Advanced Structural Engineering of Nanoporous Photonic Structures: Tailoring Nanopore Architecture to Enhance Sensing Properties

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S1. Anodization profiles used to produce NAA-ST and NAA-RF platforms

Figures S1a and b illustrates the anodization profiles applied to produce NAA-ST and NAA-RF platforms. Whereas NAA-ST platforms were produced by anodization at constant voltage, NAA platforms were fabricated by a pseudosinusoidal anodization profile, in which the anodization profile was shifted between high and low anodization voltages.

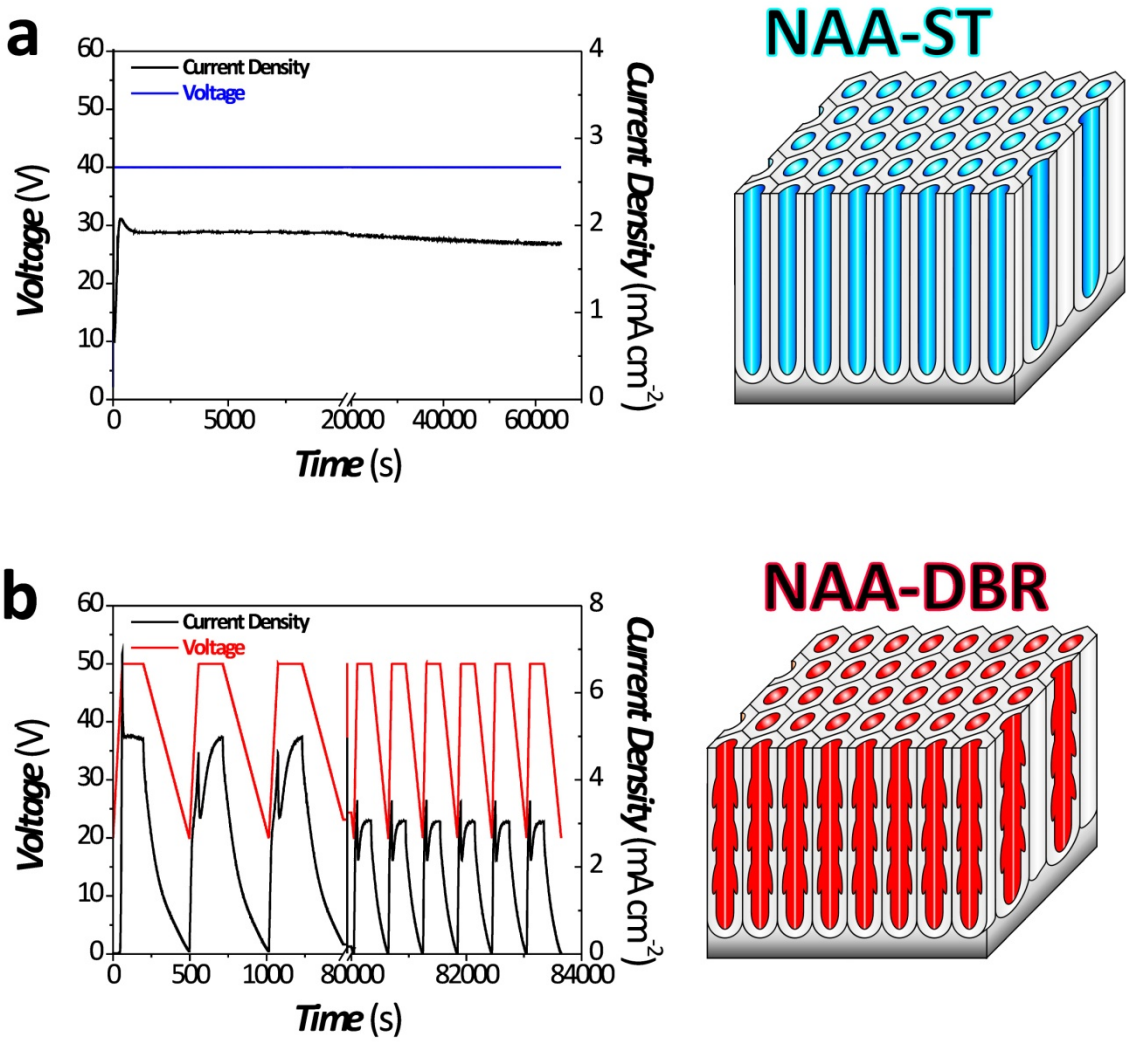

Figure S1. Anodization profiles and structural illustrations of (a) NAA-ST and (b) NAA-RF platforms.

S2. Real-time monitoring of changes in ΔOT_{eff} and $\Delta\lambda_{peak}$ in NAA-ST and NAA-RFs platforms

The optical properties of NAA-ST and NAA-RF platforms were assessed in real-time by changing the effective medium of these nanoporous structures. To this end, their nanopores were infiltrated with different aqueous solutions of glucose from 0.01 to 1.00 M (**Figure S2**). Then, changes in the effective medium of these nanoporous platforms produced changes in ΔOT_{eff} and $\Delta\lambda_{peak}$, which were used as the sensing parameters.

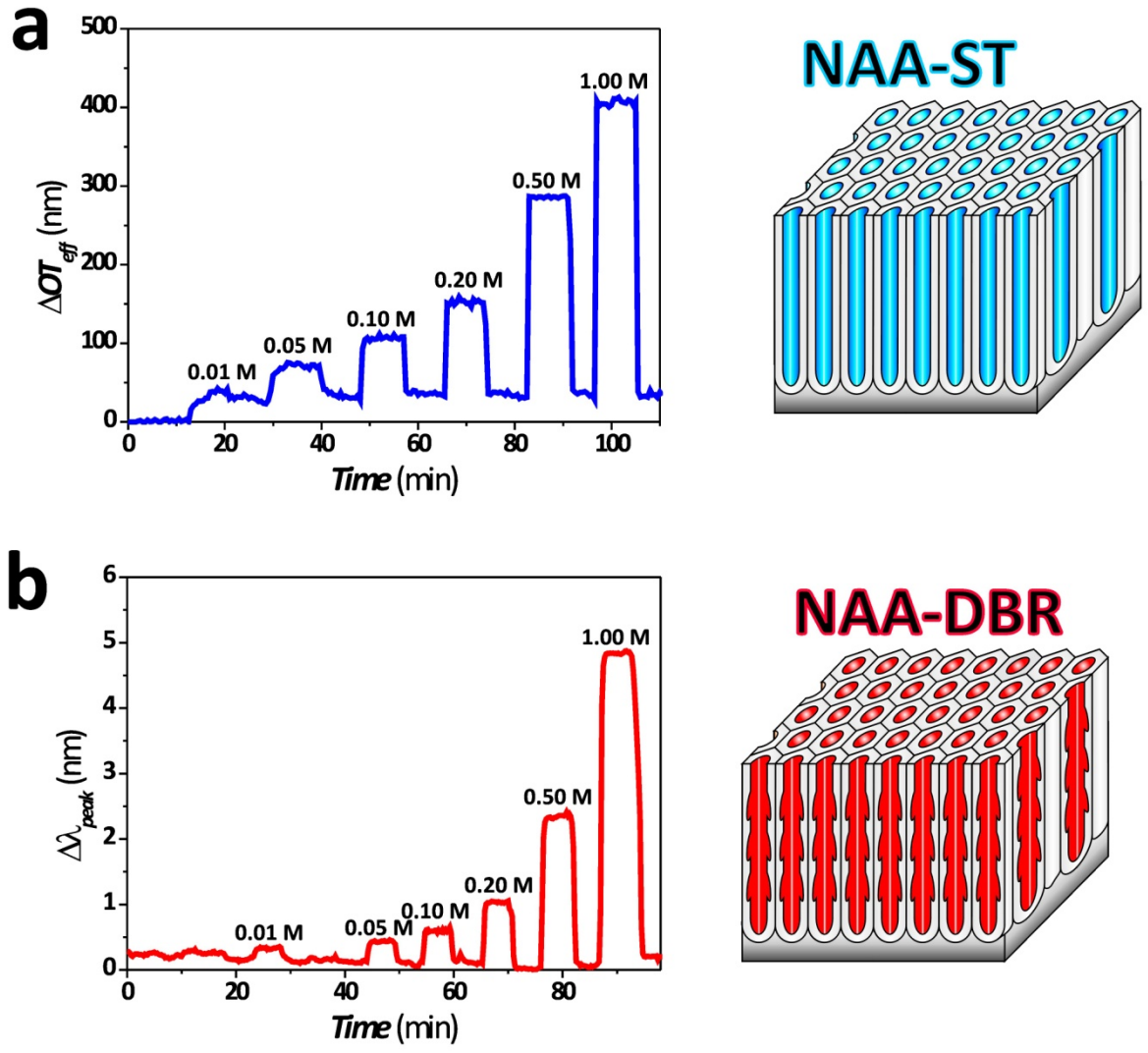

Figure S2. Examples of real-time monitoring of the effective medium change in NAA-ST and NAA-RF platforms as a result of infiltration of glucose solutions of different concentrations.