

<Supporting Information>

Suprachannels via Molecular Array of 2D Networks: Solvent Effects, Anion Exchange, and Physicochemical Properties of Silver(I) Complexes Bearing *N,N',N''*-Tris(2-pyridinylethyl)-1,3,5-benzenetricarboxamide

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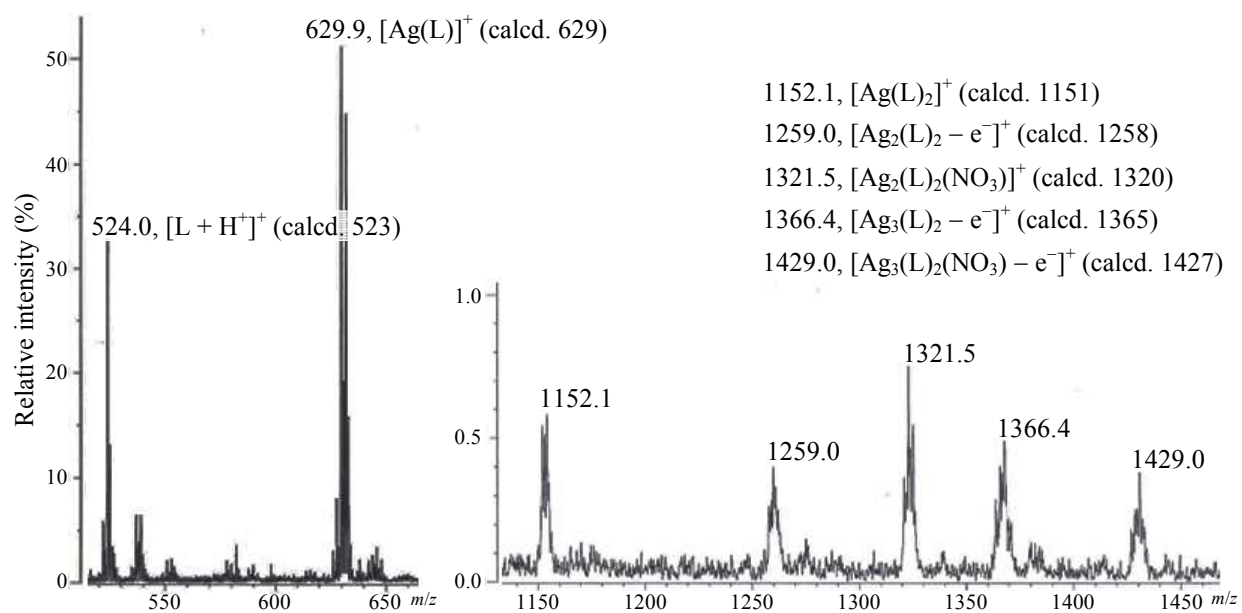


Figure S1. FAB-mass data for $[Ag_3L_2(H_2O)_2](NO_3)_3 \cdot 4CH_3OH \cdot 4H_2O$.

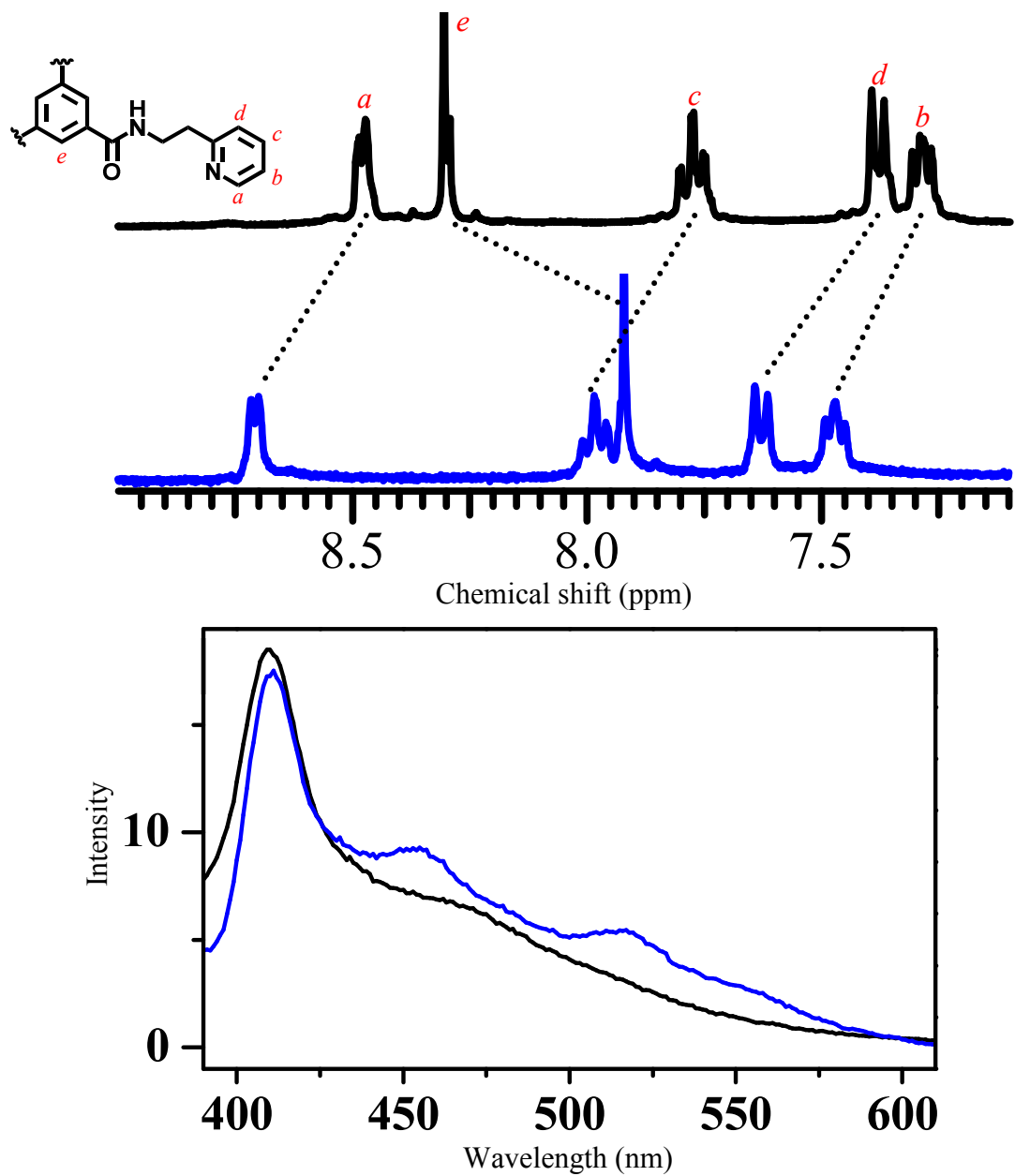


Figure S2. (top) Partial ^1H (CD_3OD) NMR spectra and (bottom) photoluminescence spectra in methanol of (black lines) L and (blue lines) $[\text{Ag}_3\text{L}_2(\text{H}_2\text{O})_2](\text{NO}_3)_3 \cdot 4\text{CH}_3\text{OH} \cdot 4\text{H}_2\text{O}$, along with the assignments.

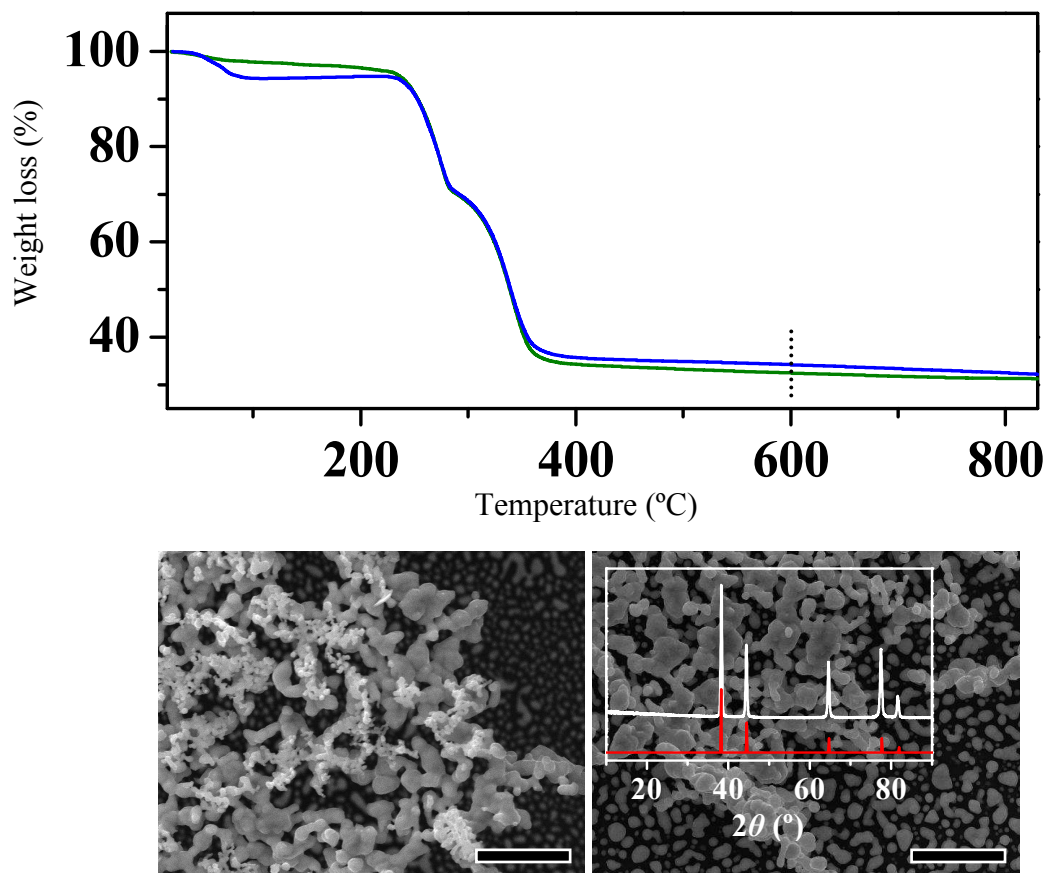


Figure S3. Top: TGA curves of (blue) $[\text{Ag}_3\text{L}_2(\text{H}_2\text{O})_2](\text{NO}_3)_3 \cdot 4\text{CH}_3\text{OH} \cdot 4\text{H}_2\text{O}$ and (green) $[\text{Ag}_3(\text{NO}_3)_2\text{L}_2](\text{NO}_3) \cdot \text{C}_2\text{H}_5\text{OH} \cdot 3\text{H}_2\text{O}$. Bottom: SEM images for (left) $[\text{Ag}_3\text{L}_2(\text{H}_2\text{O})_2](\text{NO}_3)_3 \cdot 4\text{CH}_3\text{OH} \cdot 4\text{H}_2\text{O}$ and (right) $[\text{Ag}_3(\text{NO}_3)_2\text{L}_2](\text{NO}_3) \cdot \text{C}_2\text{H}_5\text{OH} \cdot 3\text{H}_2\text{O}$ calcined at 600 °C for 2 h. Graphs indicate the powder XRD data for (white) the Ag(0) residue and (red) the reference pattern from the ICDD database (PDF no. 04-0783). Bar = 10 μm.

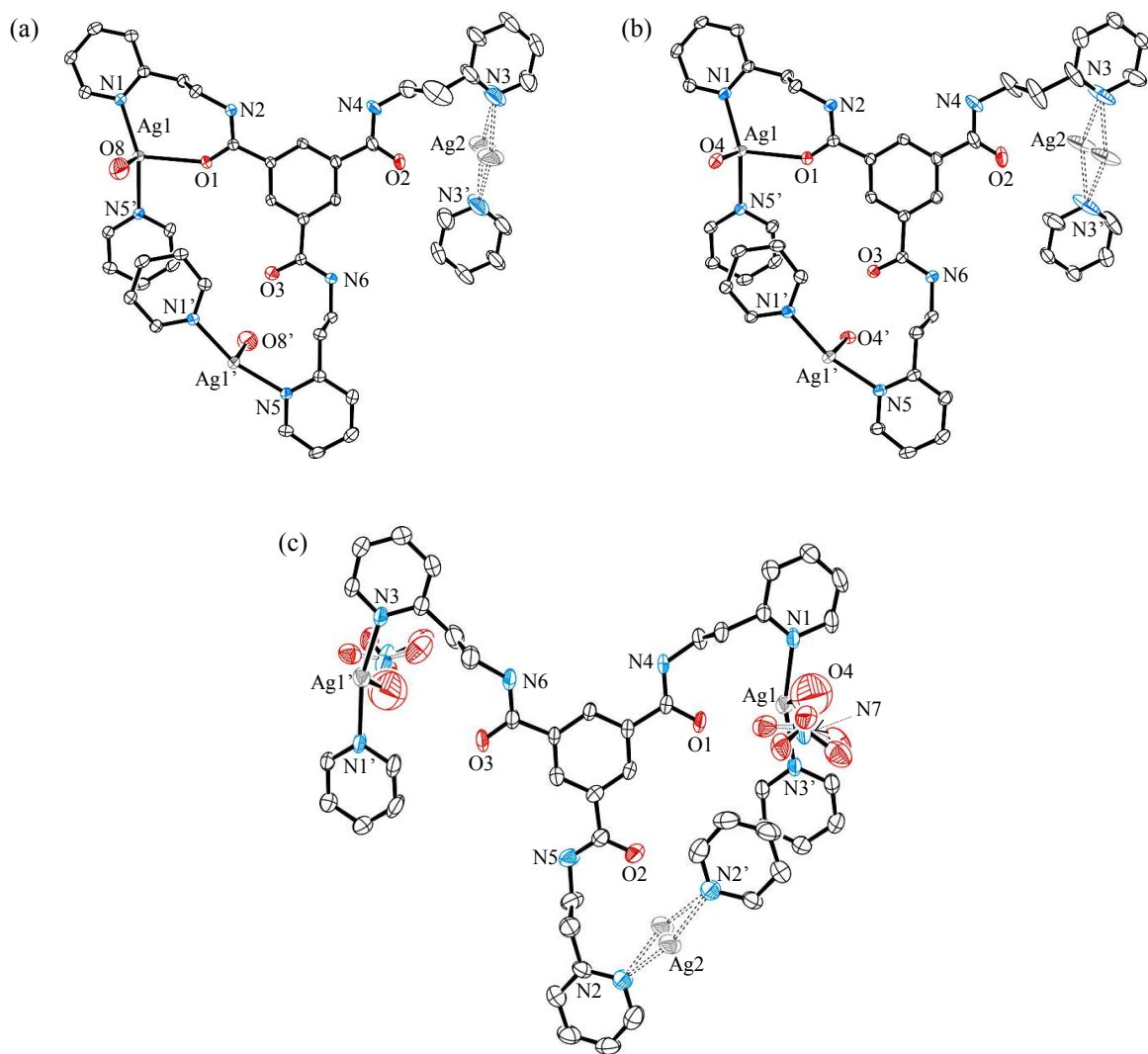


Figure S4. ORTEP drawings for (a) $[\text{Ag}_3\text{L}_2(\text{H}_2\text{O})_2](\text{NO}_2)_3 \cdot 10\text{H}_2\text{O}$, (b) $[\text{Ag}_3\text{L}_2(\text{H}_2\text{O})_2](\text{NO}_3)_3 \cdot 4\text{CH}_3\text{OH} \cdot 4\text{H}_2\text{O}$, and (c) $[\text{Ag}_3(\text{NO}_3)_2\text{L}_2](\text{NO}_3) \cdot \text{C}_2\text{H}_5\text{OH} \cdot 3\text{H}_2\text{O}$ with thermal ellipsoids shown at 30% probability. Counteranions and solvate molecules were omitted for clarity.

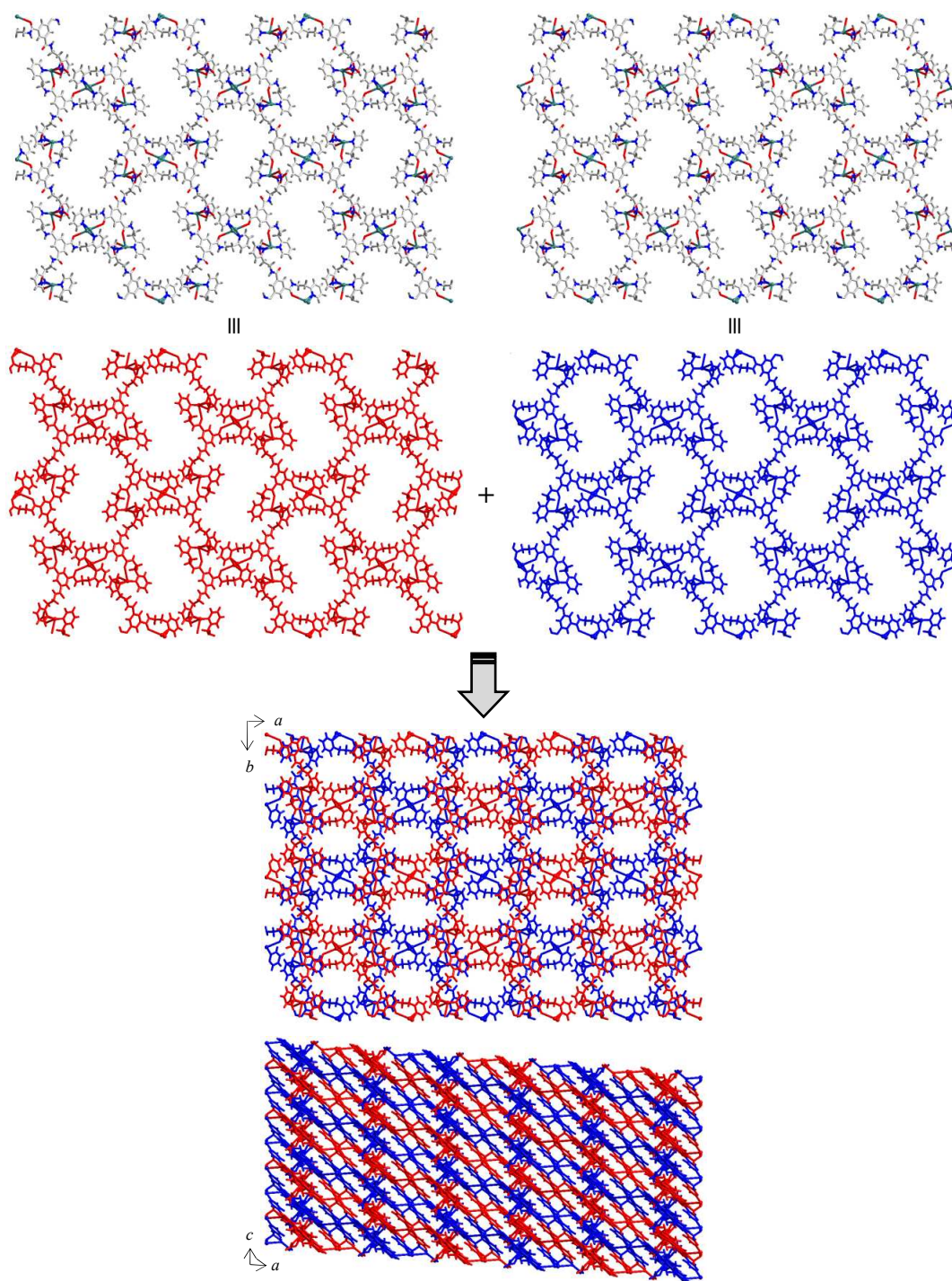


Figure S5. Packing diagram for $[\text{Ag}_3(\text{NO}_3)_2\text{L}_2](\text{NO}_3) \cdot \text{C}_2\text{H}_5\text{OH} \cdot 3\text{H}_2\text{O}$ showing $abab\cdots$ layers.

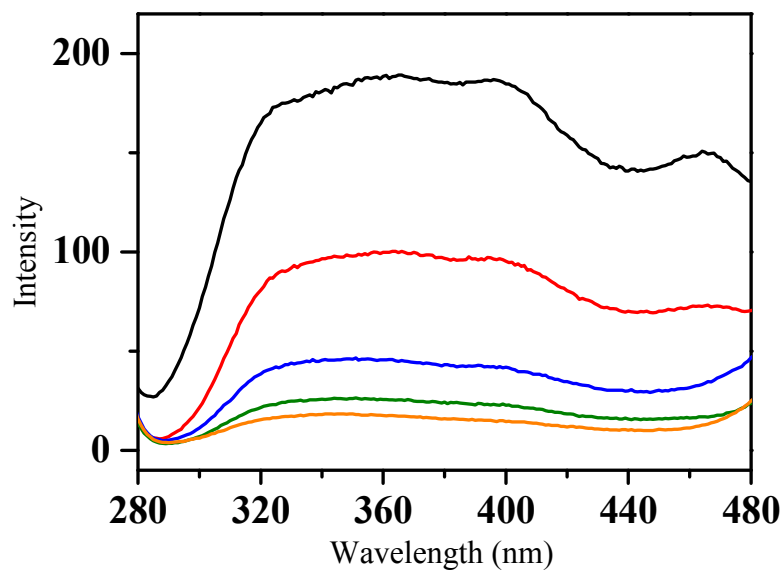


Figure S6. PL spectra ($\lambda_{\text{ex}} = 255$ nm) for $[\text{Ag}_3\text{L}_2(\text{H}_2\text{O})_2](\text{NO}_3)_3 \cdot 4\text{CH}_3\text{OH} \cdot 4\text{H}_2\text{O}$ suspended in water (1 mL) upon addition of *n*-propanol (black, 0 mL; red, 0.2 mL; blue, 0.5 mL; green, 0.7 mL; orange, 1 mL).

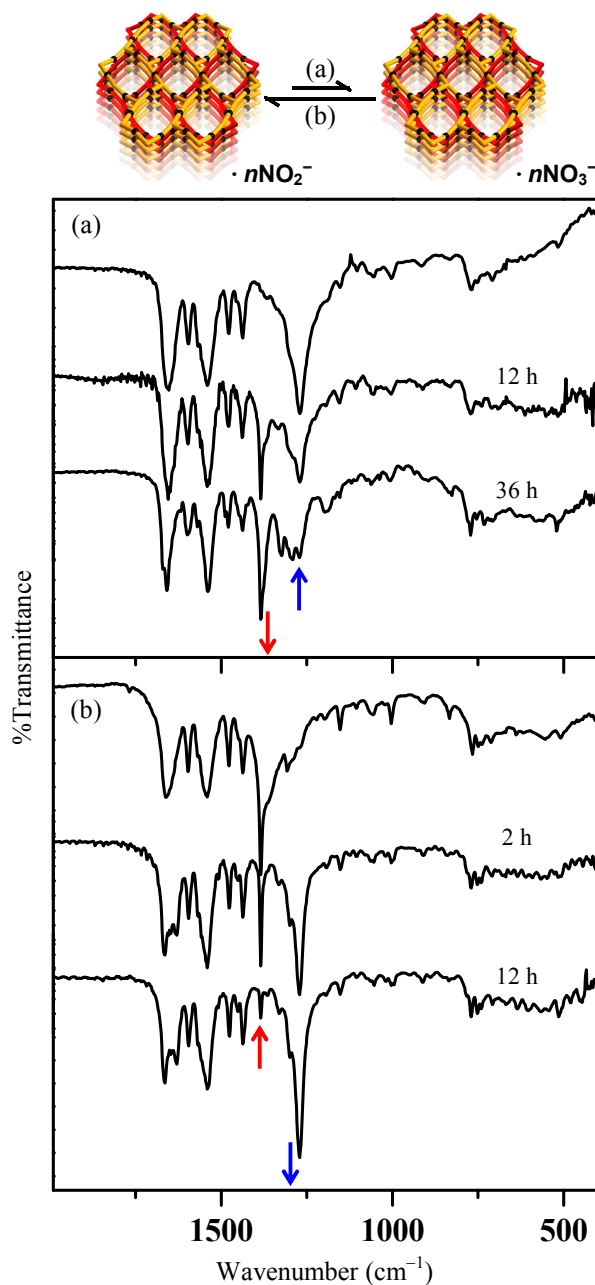


Figure S7. IR spectra showing anion exchange of (a) $[\text{Ag}_3\text{L}_2(\text{H}_2\text{O})_2](\text{NO}_2)_3 \cdot 10\text{H}_2\text{O}$ with 3 equivalents of NaNO_3 and (b) $[\text{Ag}_3\text{L}_2(\text{H}_2\text{O})_2](\text{NO}_3)_3 \cdot 4\text{CH}_3\text{OH} \cdot 4\text{H}_2\text{O}$ with 3 equivalents of NaNO_2 under aqueous solution. The blue and red arrows indicate the characteristic IR bands for nitrite and nitrate anions, respectively.