Electronic Supplementary Information (ESI)

Systematic study of ionic conduction in silver iodide/mesoporous alumina composites 3: Effect of binary silver halide doping

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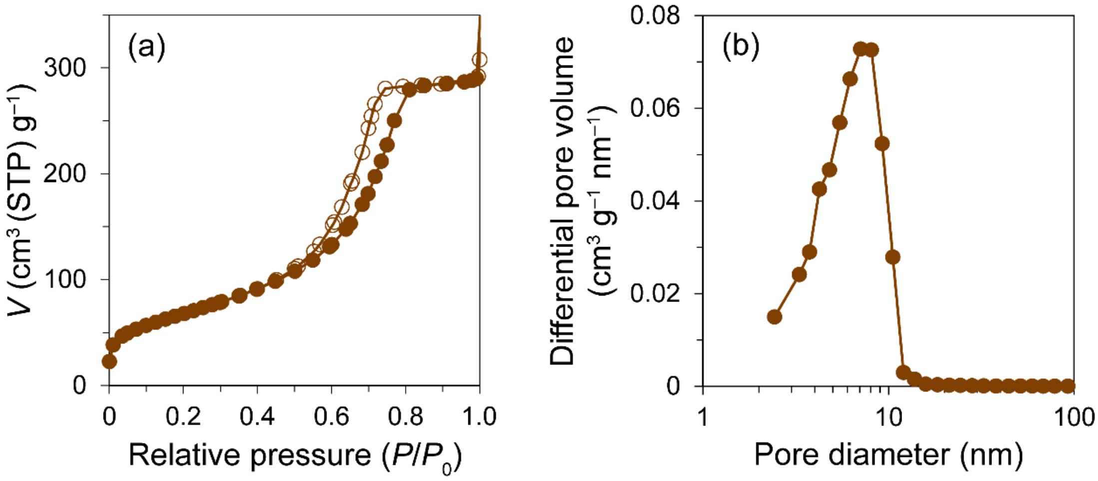

Fig. S1 (a) N_2 gas adsorption (closed circles) and desorption (open circles) isotherms of MPA at 77 K. (b) Pore size distribution of MPA obtained by applying the BJH method.

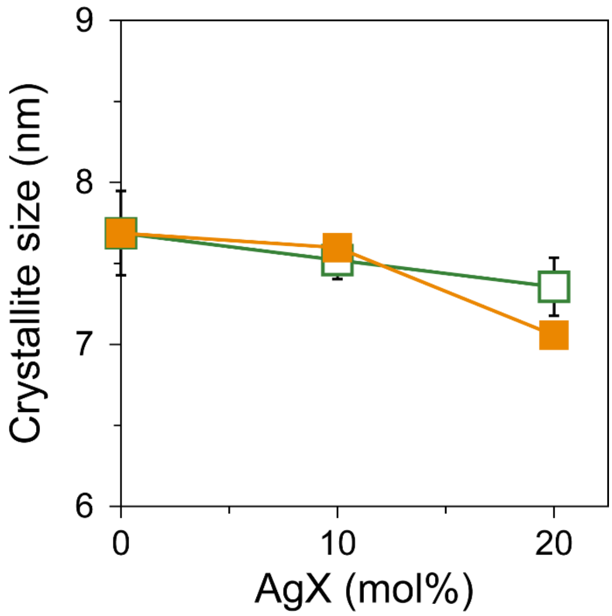

Fig. S2 Plots of crystallite size of β-AgI_{ss} phase against AgX (X = Br and Cl)-doping ratio for AgI-AgBr-AgCl/MPA composites (closed orange squares) and AgI-AgBr/MPA composites (open green squares; Y. Fukui *et al.*, *Phys. Chem. Chem. Phys.*, 2024, **26**, 13675).

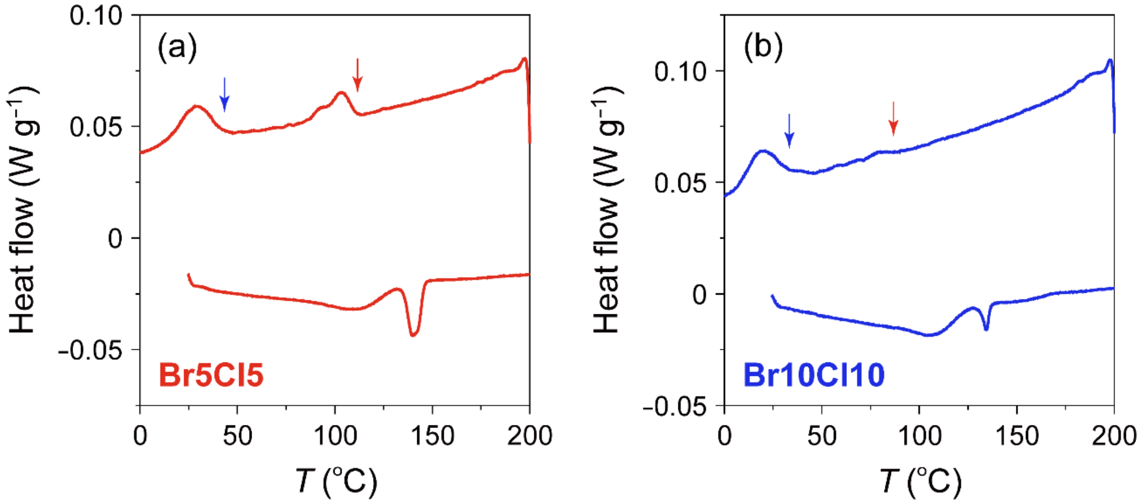

Fig. S3 DSC profiles of (a) **Br5Cl5** and (b) **Br10Cl10**. The red and blue arrows indicate the onset temperatures of the transition on the high- and low-temperature sides, respectively, in the cooling process.

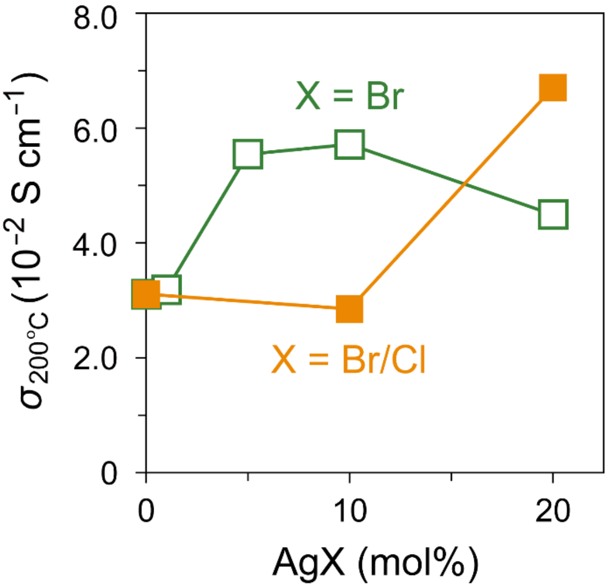

Fig. S4 Plots of $\sigma_{200°C}$ against AgX (X = Br and Cl)-doping ratio for AgI-AgBr-AgCl/MPA composites (closed orange squares) and AgI-AgBr/MPA composites (open green squares; Y. Fukui *et al.*, *Phys. Chem. Chem. Phys.*, 2024, **26**, 13675).

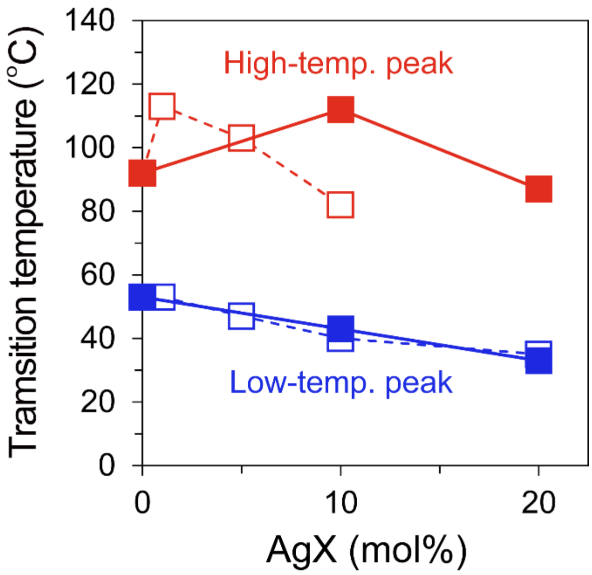

Fig. S5 AgX (X = Br and Cl)-doping ratio dependence of transition temperatures for AgI-AgBr-AgCl/MPA composites (closed squares) and AgI-AgBr/MPA composites (open squares; Y. Fukui *et al.*, *Phys. Chem. Chem. Phys.*, 2024, **26**, 13675) determined by the DSC profile in the cooling process (red: high-temperature peak, blue: low-temperature peak).