

# **Excitonic Bands in the Optical Absorption Spectra of (Bu<sub>4</sub>N)CuBr<sub>2</sub>, (Et<sub>4</sub>N)<sub>2</sub>Cu<sub>2</sub>Br<sub>4</sub>, (Pr<sub>4</sub>N)<sub>2</sub>Cu<sub>4</sub>Br<sub>6</sub>, (Bu<sub>4</sub>N)<sub>2</sub>Cu<sub>2</sub>I<sub>4</sub>, (Me<sub>4</sub>N)Cu<sub>2</sub>I<sub>3</sub>, (Pr<sub>4</sub>N)<sub>4</sub>Ag<sub>4</sub>I<sub>8</sub>, (Me<sub>4</sub>N)Ag<sub>2</sub>I<sub>3</sub>, (Et<sub>4</sub>N)Ag<sub>2</sub>Br<sub>3</sub>, and Similar Compounds**

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The title compounds (natural low-dimensional semiconductor systems) exhibit strong excitonic optical absorption bands in the UV spectral region, because of the quantum confinement of excitons, as in the cases of bivalent-metal and trivalent-metal halide complexes. The excitonic bands are shifted to longer wavelengths, approaching those of the corresponding bulk materials, as the anion-size or the anion-dimensionality increases.

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