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## From grain growth to astromineralogy: Studying dust with X-ray imaging and spectroscopy

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X-ray imaging and spectroscopy can provide a powerful tool for measuring the large end of the dust grain size distribution —important for interpreting infrared extinction as well as understanding grain growth in the diffuse interstellar medium (ISM). In addition, X-ray photoelectric absorption edges observed in high resolution spectra of Galactic X-ray binaries directly reveal the mineral composition of interstellar dust. I will review open problems in the field of astromineralogy, as probed by X-ray extinction. I will describe how observations from the next two X-ray missions —XARM and ARCUS —will answer some of those questions. Finally, I will discuss synergistic opportunities for X-ray telescopes and JWST to provide a more complete picture of dust grain evolution in the diffuse ISM.

### Consider for a poster?

Yes

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**Session Classification:** Poster Presentations

**Track Classification:** What is dust?