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Resonant Inelastic X-ray Scattering of Hexagonal Boron Nitride JOHN VINSON, TERRENCE JACH, NIST - Natl Inst of Stds Tech, MATTHIAS MUELLER, RAINER UNTERUMSBERGER, BURKHARD BECKHOFF, Physikalisch-Technische Bundesanstalt — We present resonant x-ray emission spectra, both measured and calculated, at the nitrogen edge of hexagonal boron nitride. Using the Bethe-Salpeter equation as implemented in the OCEAN code, we investigate the effects of GW self-energy corrections and atomic disorder on the spectra. We highlight the importance of considering the effects of the core-hole excitation on the vibrational state of the system, and point to ways to include such effects in calculations of extended systems.

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