Abstract Submitted
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Low-Energy Electron Diffraction applied to the surface investigation of boron doped silicon ASHLEY ERNST, Ohio Northern University — Boron doped silicon samples show a diffusion of B atoms from the bulk to the surface, accompanied by the surface reconstruction of the silicon wafer. The present study investigates the boron induced surface reconstruction of Si(111), via low-energy electron diffraction (LEED). Computationally obtained I(E) spectra when compared to the corresponding experimental curves resolve the atomic structure of the ($\sqrt{3}$x$\sqrt{3}$)R30°-B phase, and confirm that boron occupies substitution sites underneath Si atoms, in agreement with the findings of previous studies.

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