

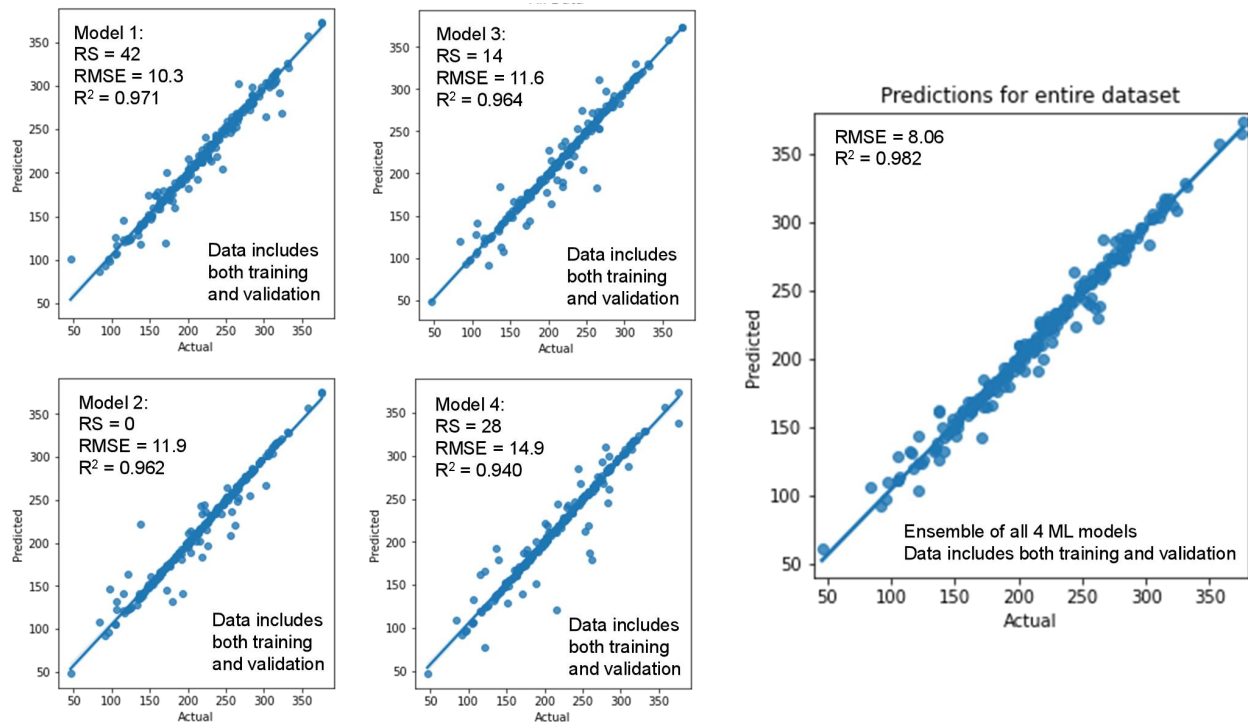
## **Supplementary Material**

**Borides as promising  $M_2AX$  phase materials with high elastic modulus using machine learning and optimization**

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**Supplementary Figure 1.** Parity plots for the entire dataset (training and validation) using individual XGB models developed at RS of 42, 0, 14, and 28, as well as the ensemble of the same 4 XGB models. XGB: XGBoost; RS: random states.