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Machine learning study on superlattice electron blocking layer design for AlGaN deep ultraviolet light-emitting diodes using the stacked XGBoost/LightGBM algorithm

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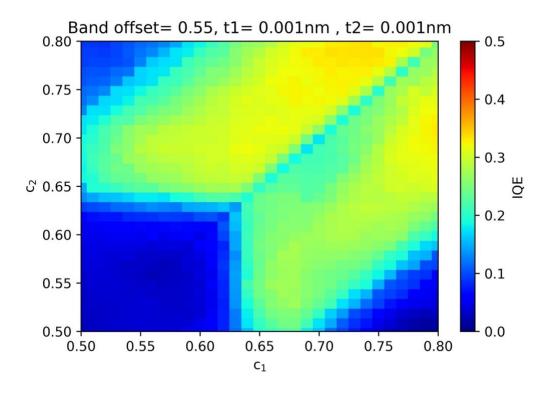
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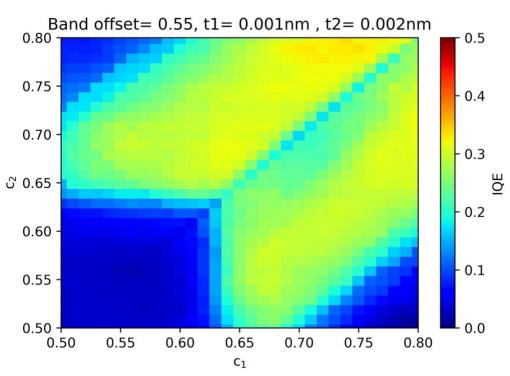
† These authors contributed equally.

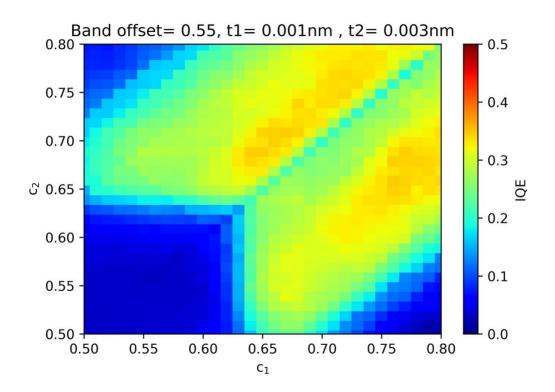
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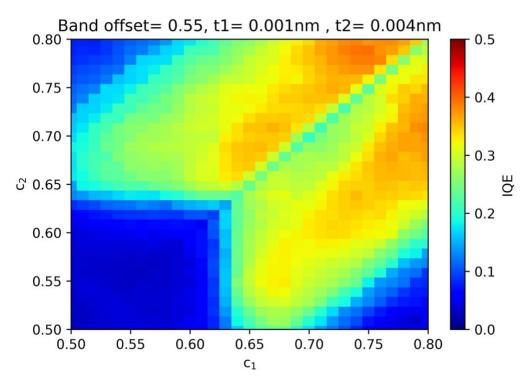
* xzhang33@nd.edu and <u>xiaohang.li@kaust.edu.sa</u>

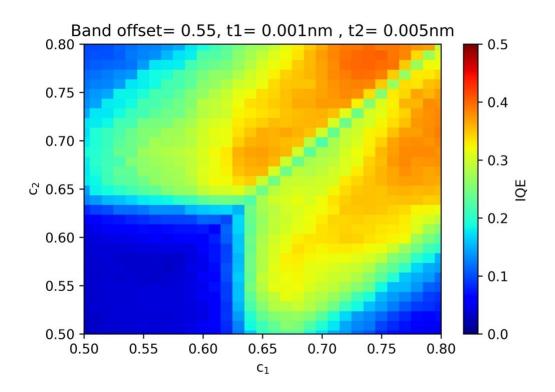
S1. Internal quantum efficiency (IQE) predictions from stacked XGBoost/LightGBM model of superlattice (SL) electron blocking layer (EBL) with different composition combinations under the band offset ratio = 0.55.

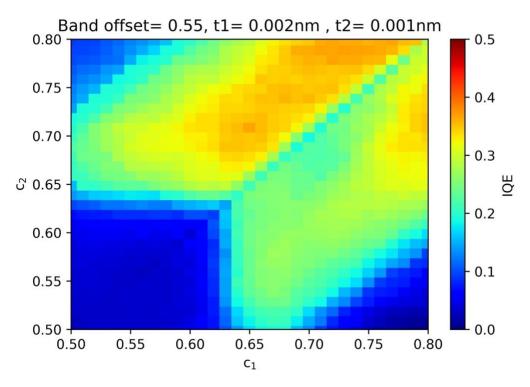


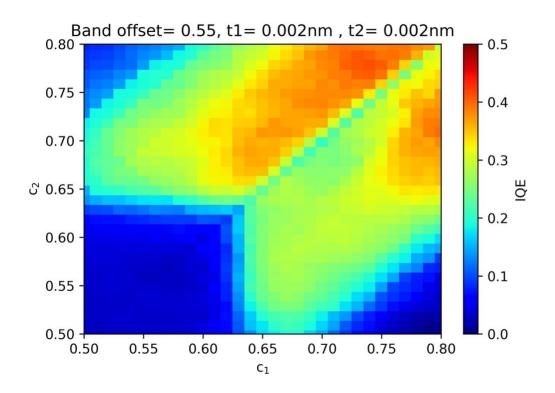


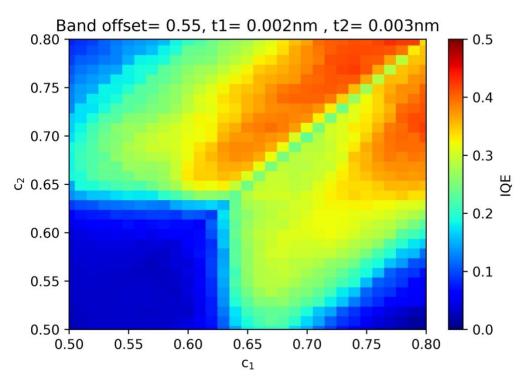


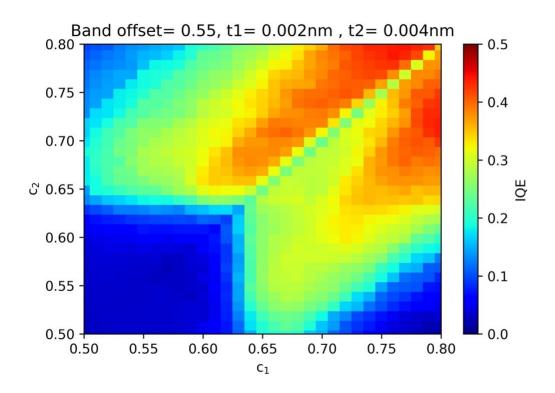


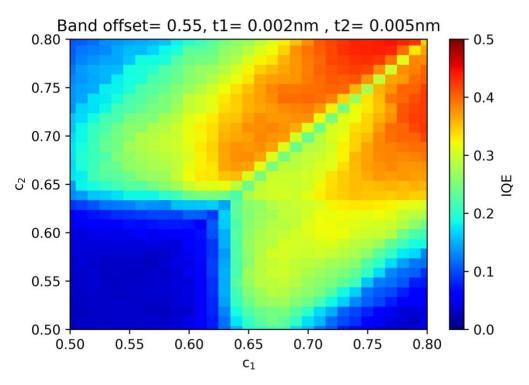


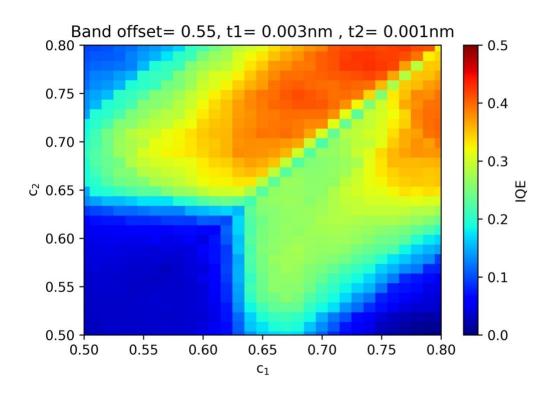


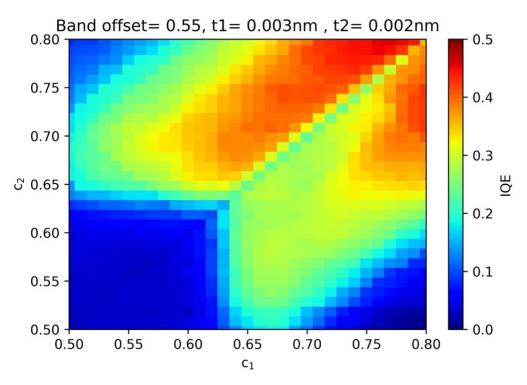


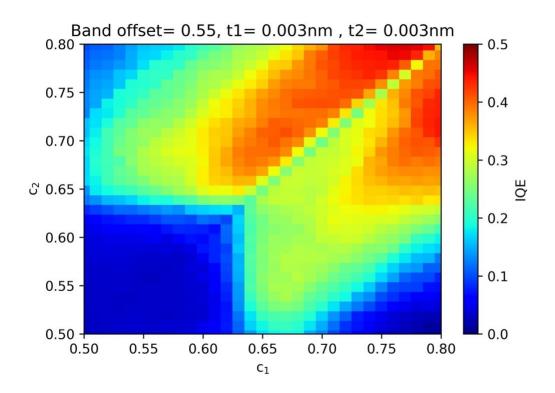


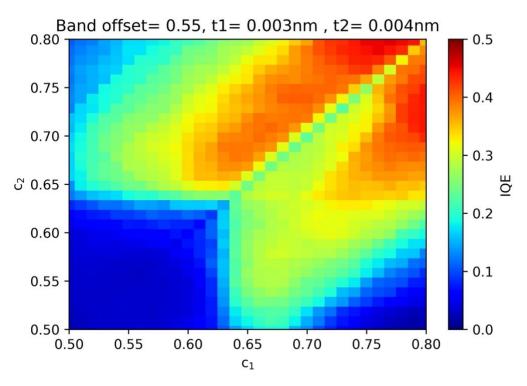


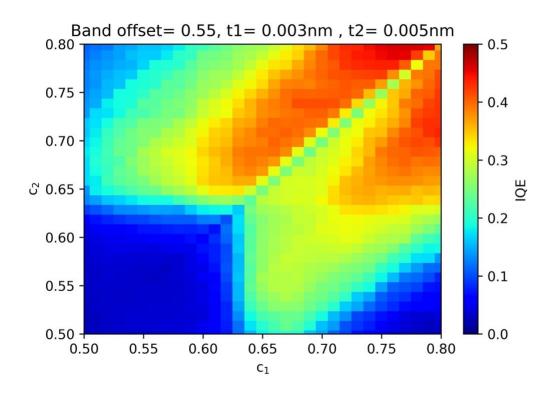


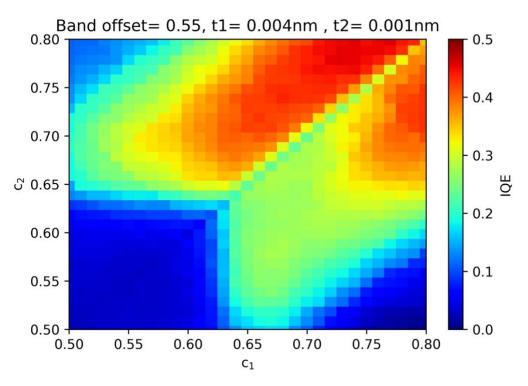


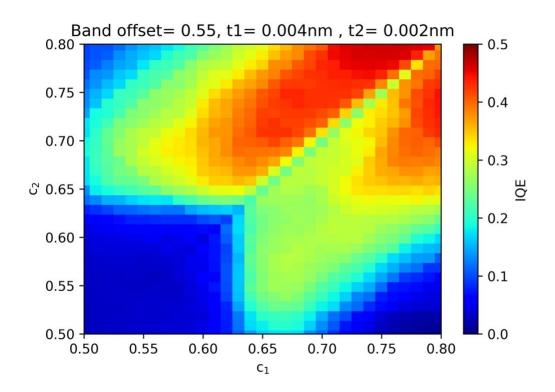


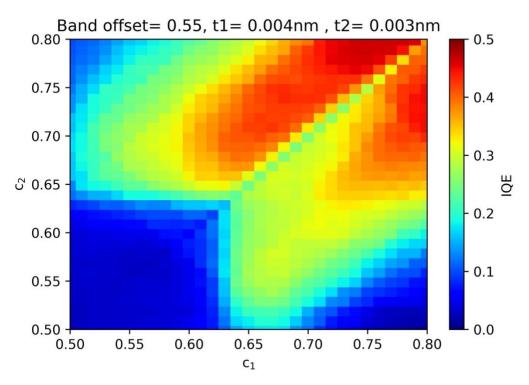


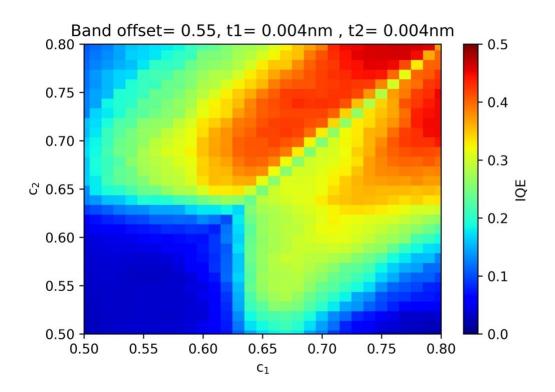


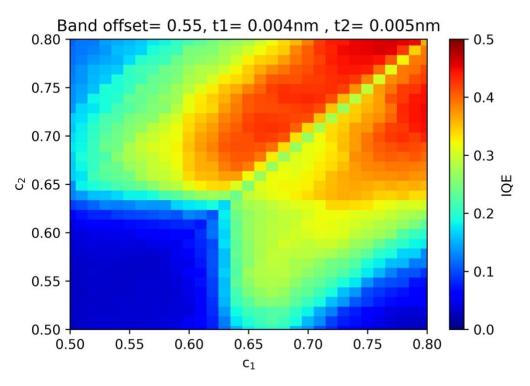


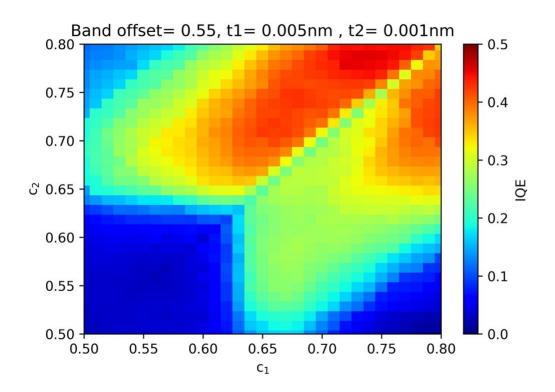


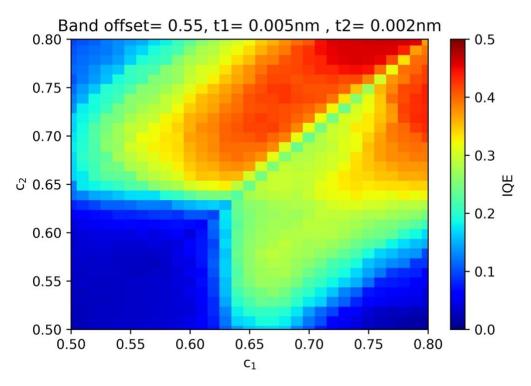


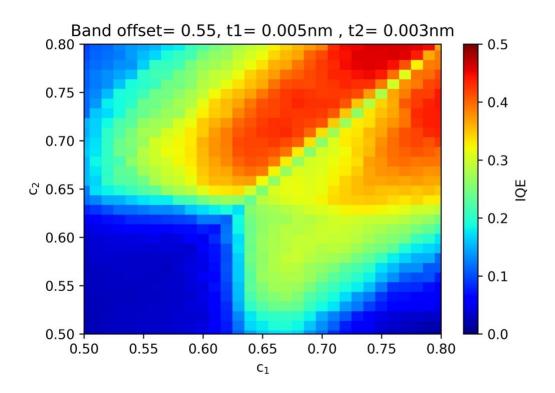


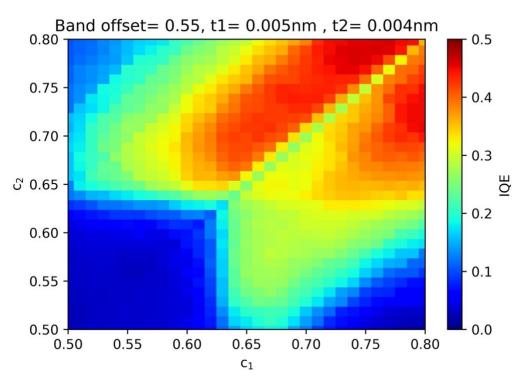


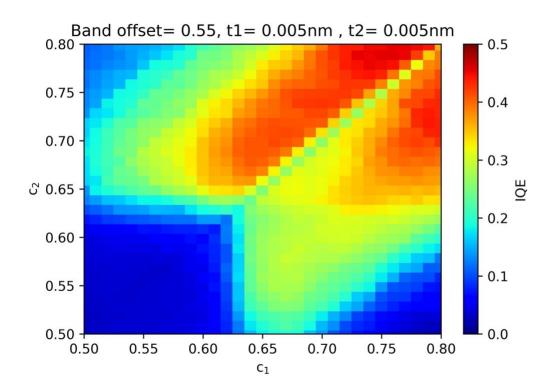




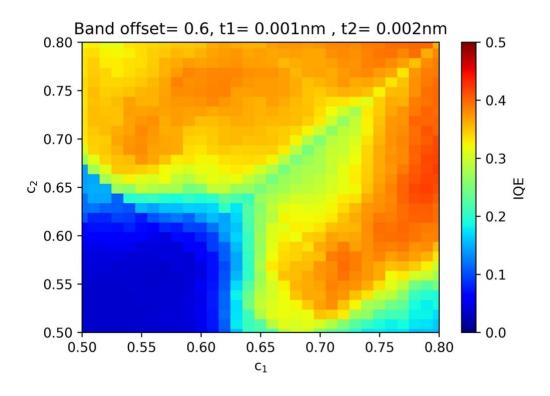


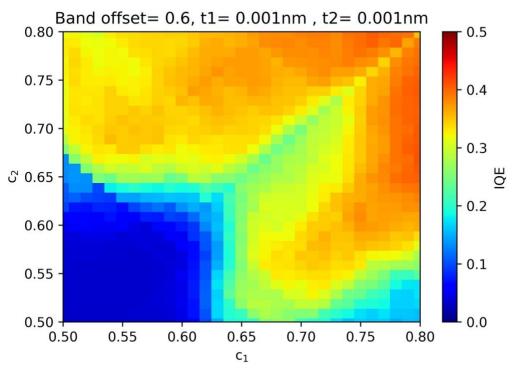


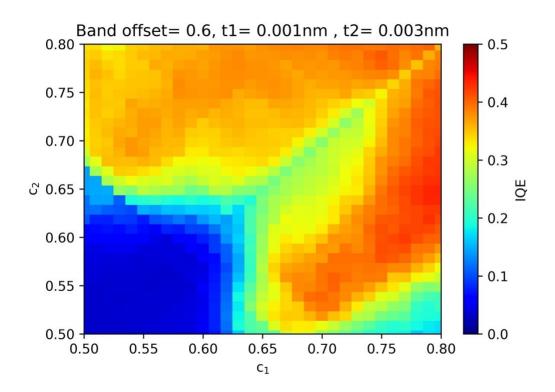


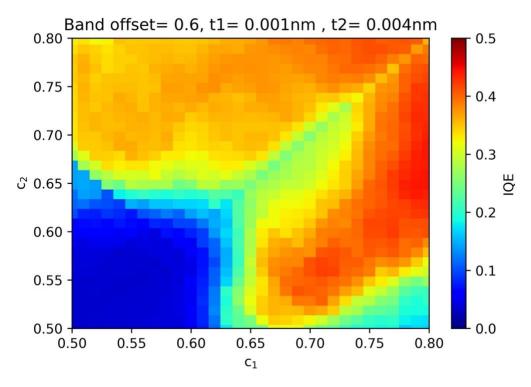


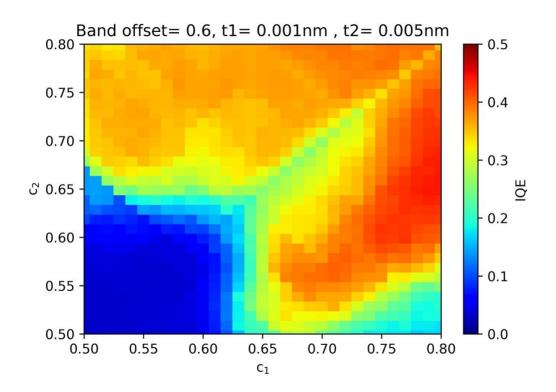
S2. Internal quantum efficiency (IQE) predictions from stacked XGBoost/LightGBM model of superlattice (SL) electron blocking layer (EBL) with different composition combinations under the band offset ratio = 0.6.

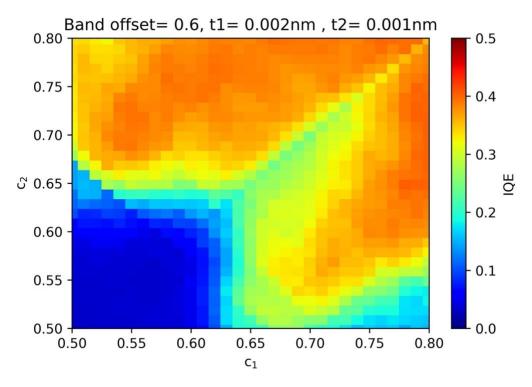


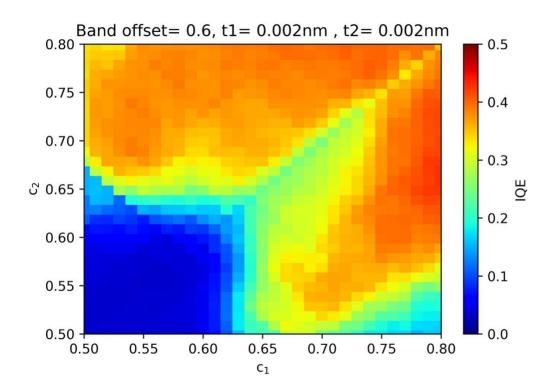


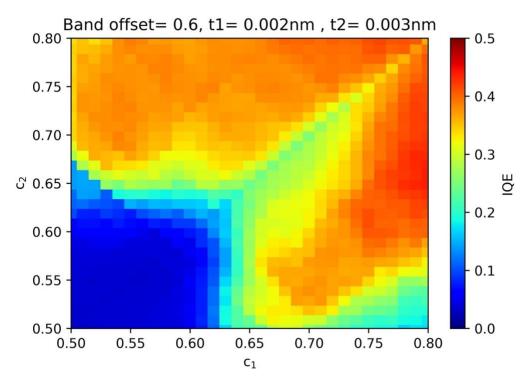


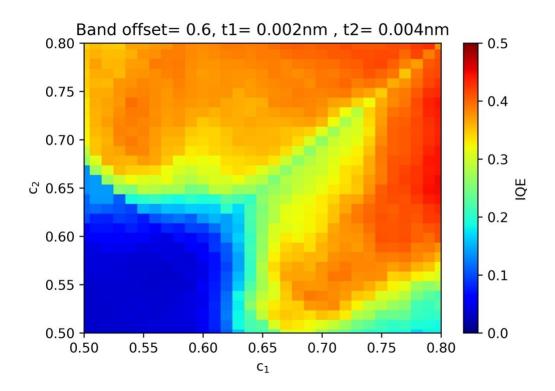


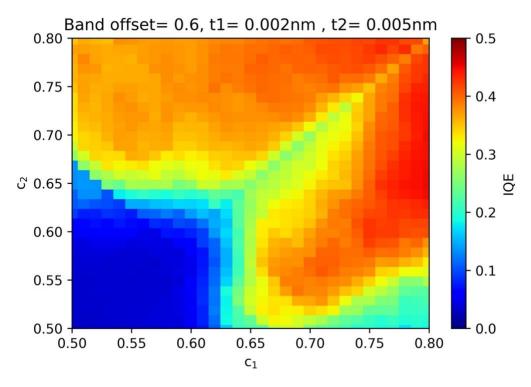


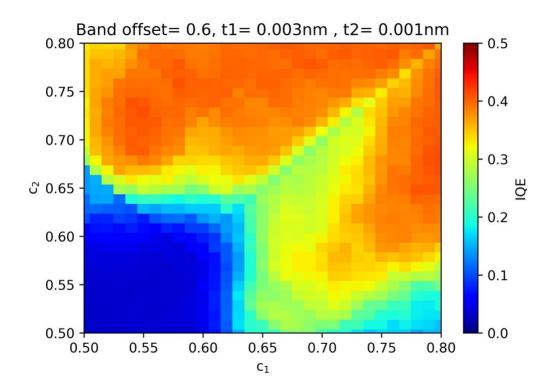


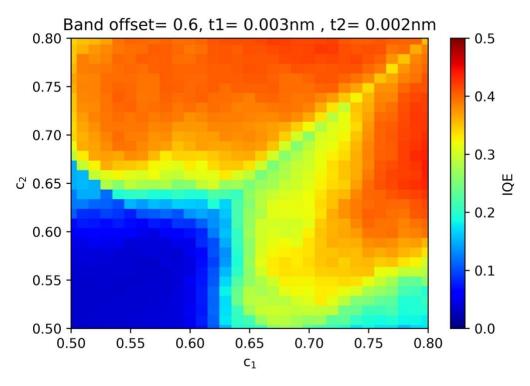


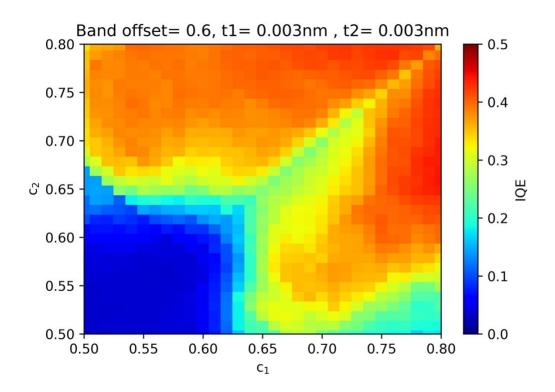


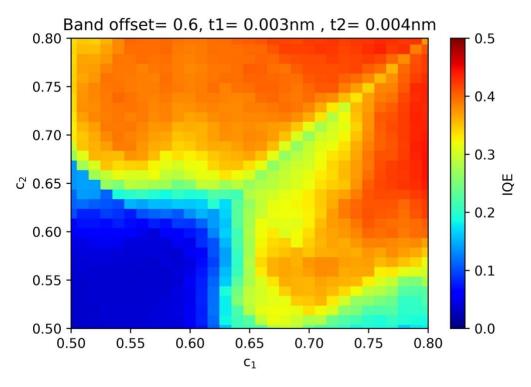


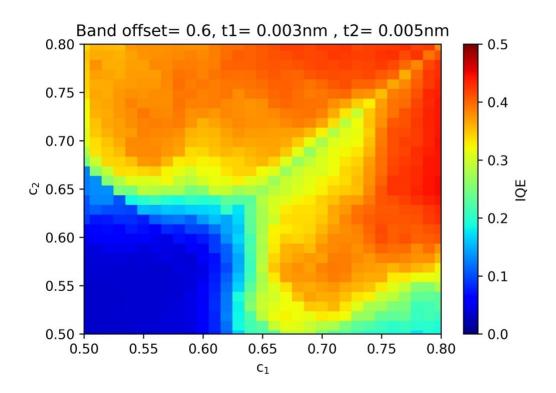


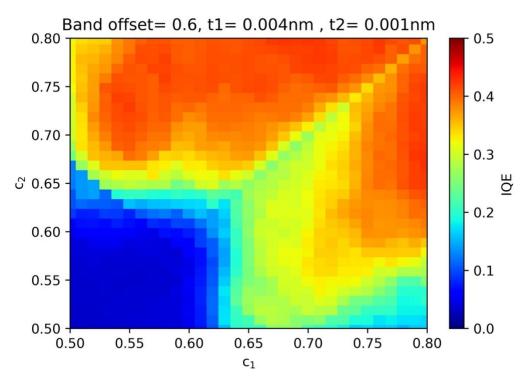


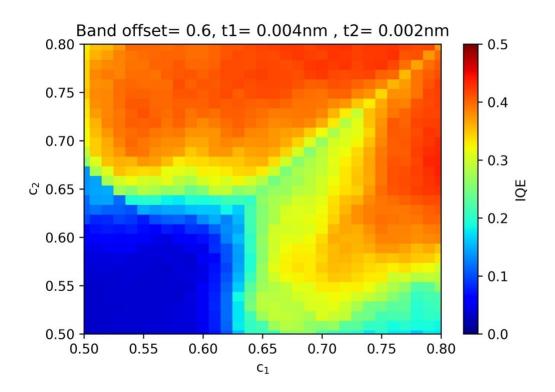


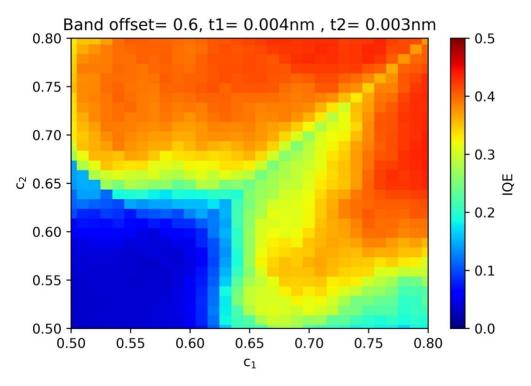


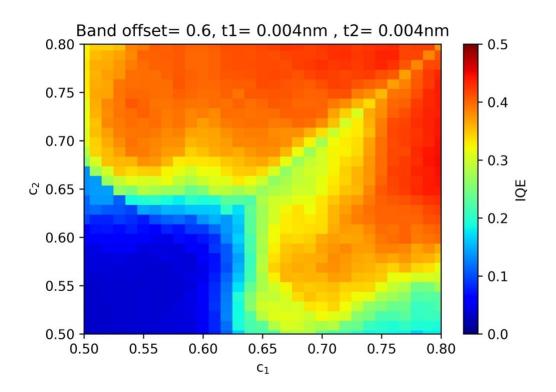


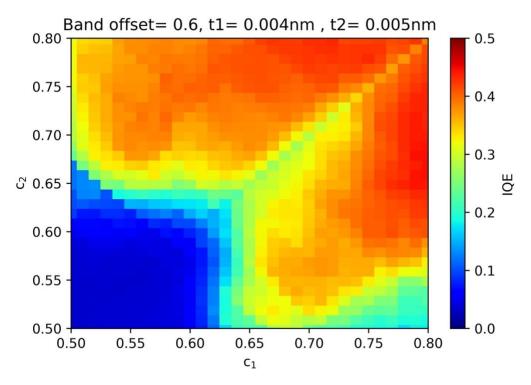


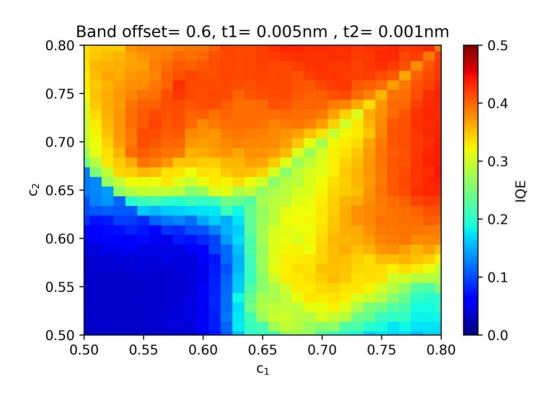


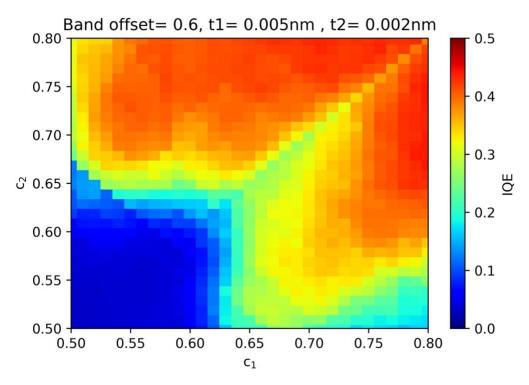


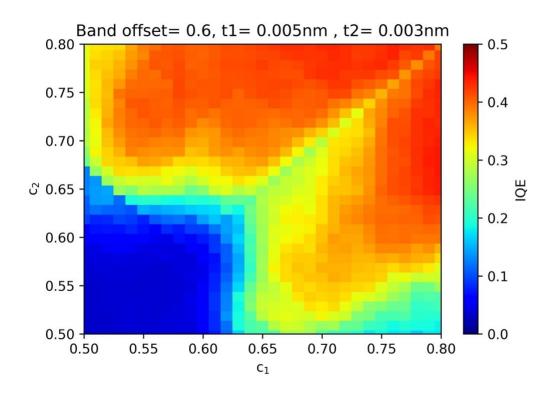


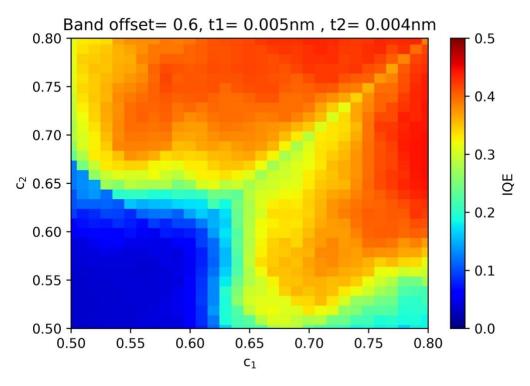


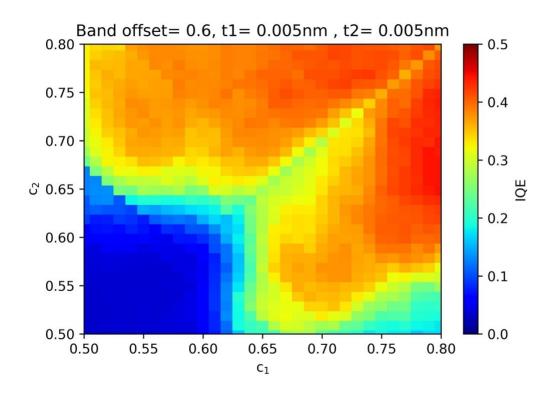




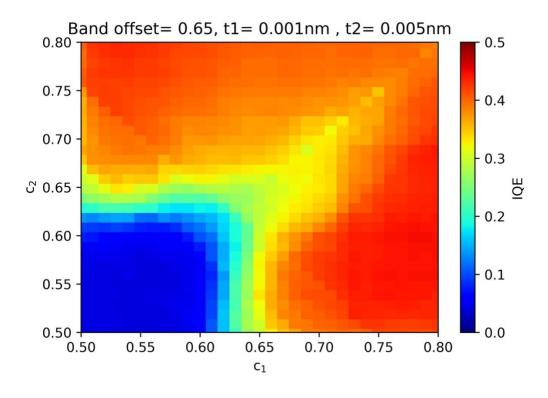


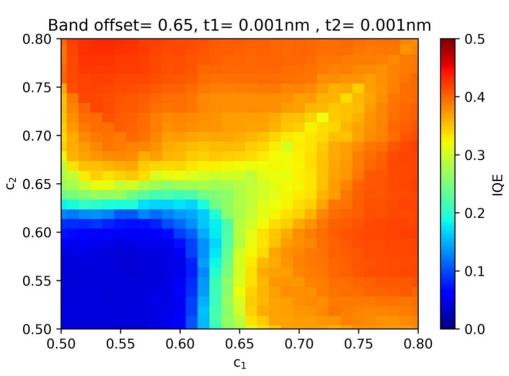


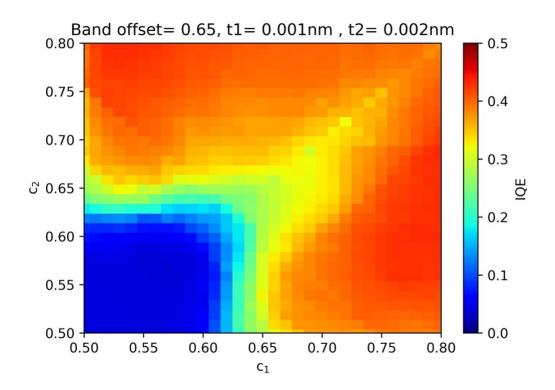


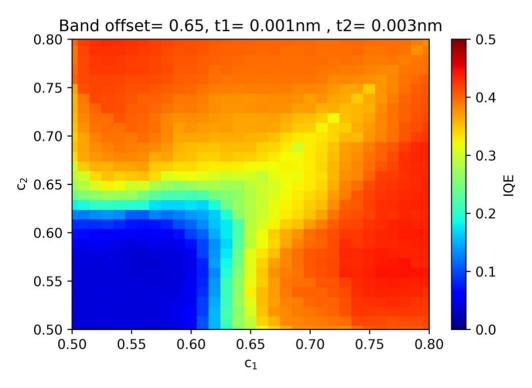


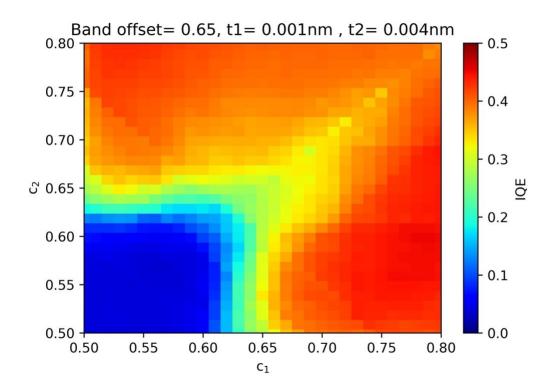
S3. Internal quantum efficiency (IQE) predictions from stacked XGBoost/LightGBM model of superlattice (SL) electron blocking layer (EBL) with different composition combinations under the band offset ratio = 0.65.

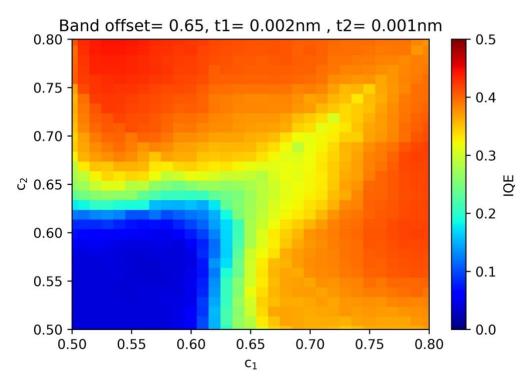


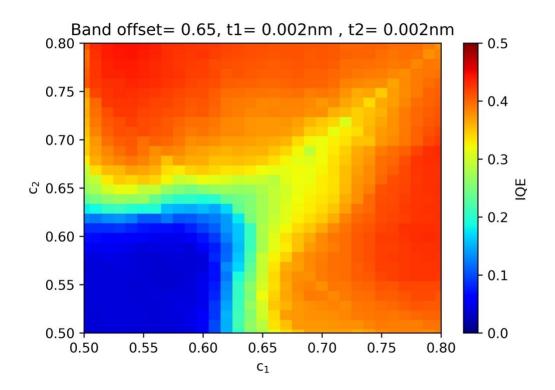


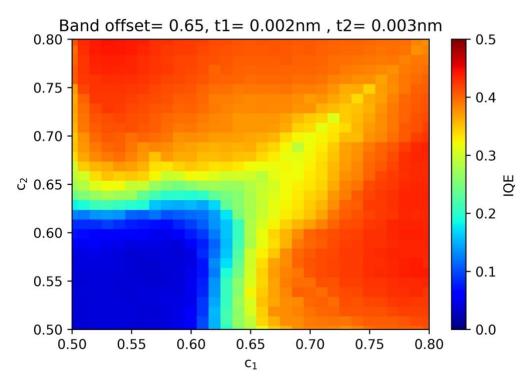


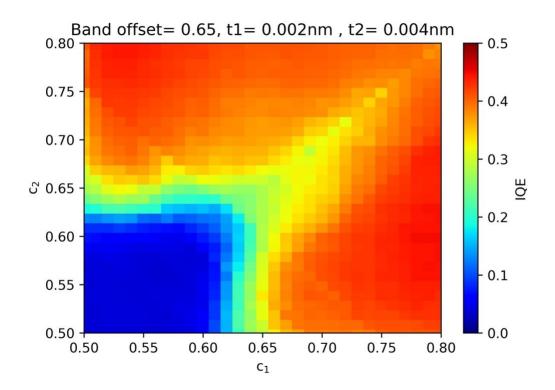


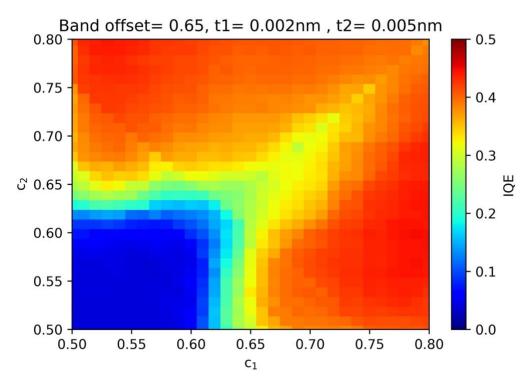


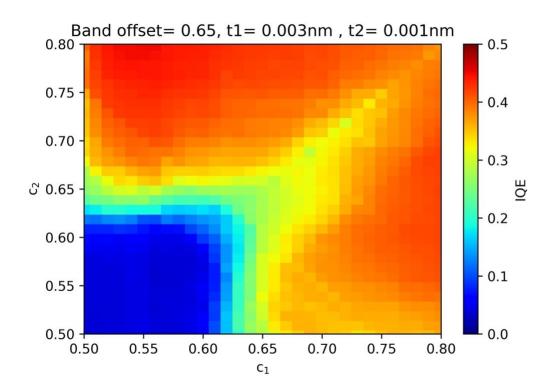


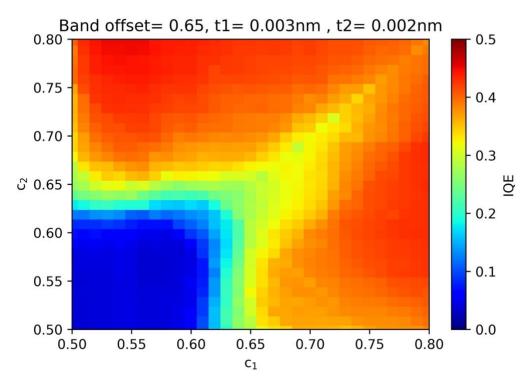


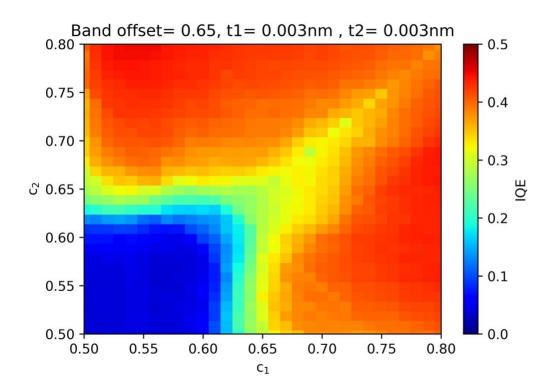


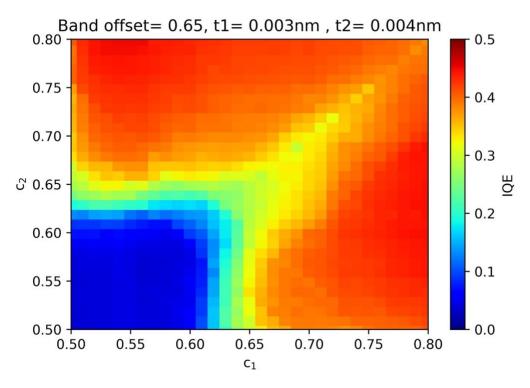


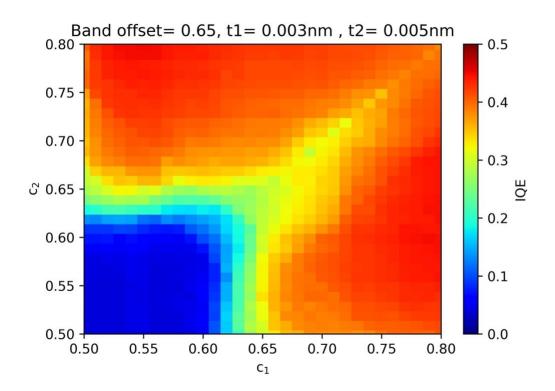


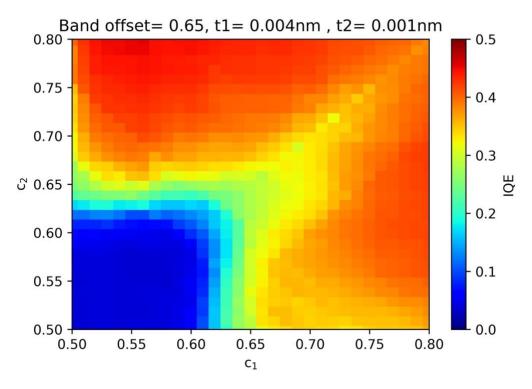


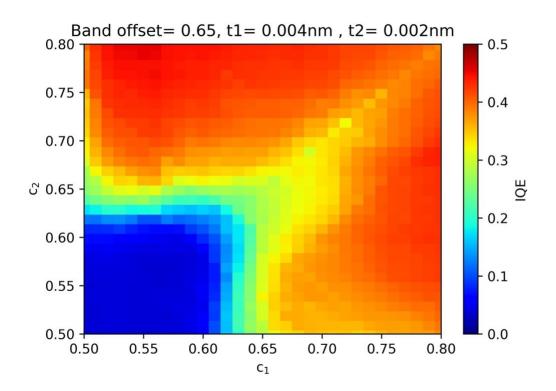


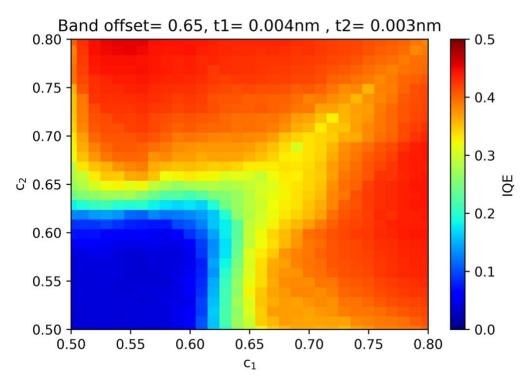


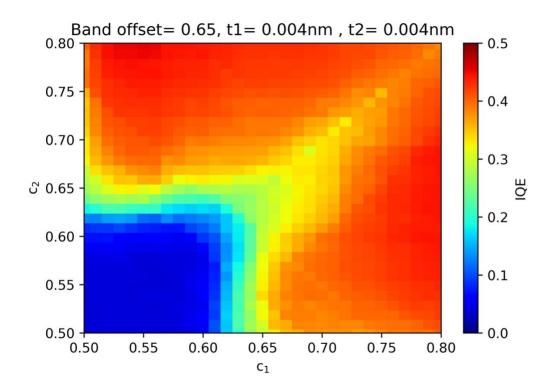


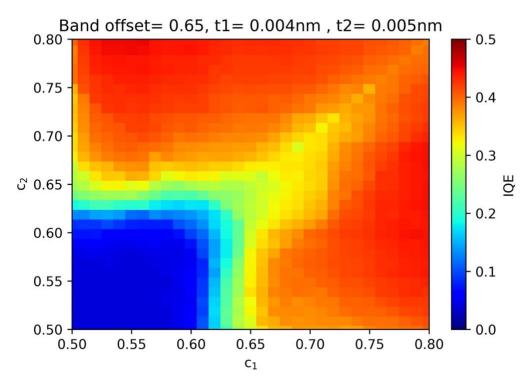


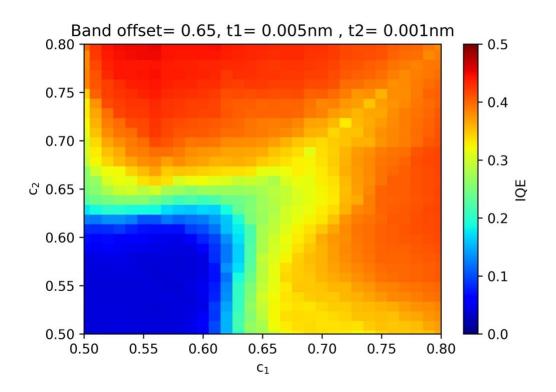


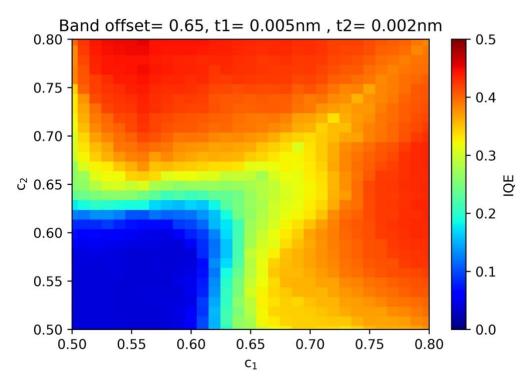


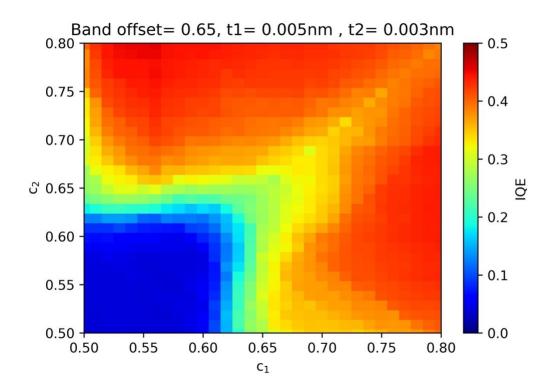


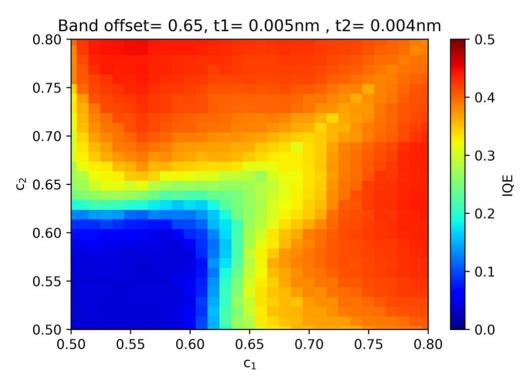


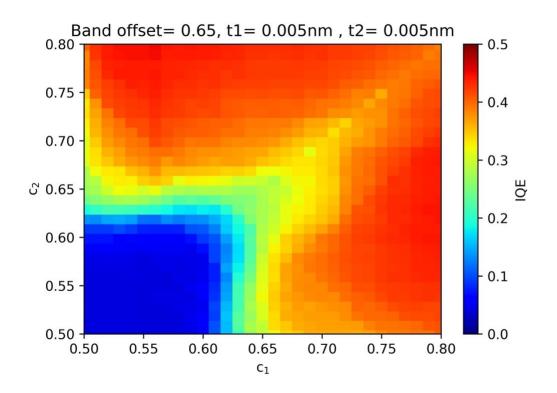












S4. Internal quantum efficiency (IQE) predictions from stacked XGBoost/LightGBM model of superlattice (SL) electron blocking layer (EBL) with different composition combinations under the band offset ratio = 0.7.

