

Article

Research on Interface Bonding Properties of TiAlSiN/WC-Co Doped with Graphene

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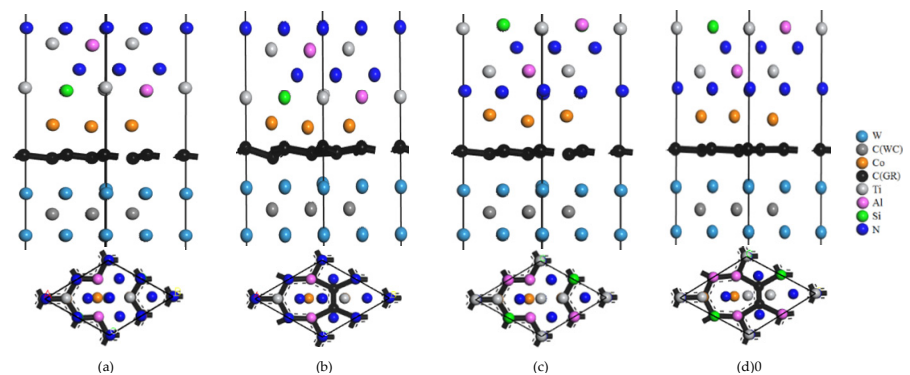


Figure S1. Interface models of matrix doped with defective graphene: (a) TiAlSiN_{Si}/WC/svGR/Co; (b) TiAlSiN_{Si}/WC/tdGR/Co; (c) TiAlSiN_N/WC/svGR/Co; (d) TiAlSiN_N/WC/tdGR/Co.

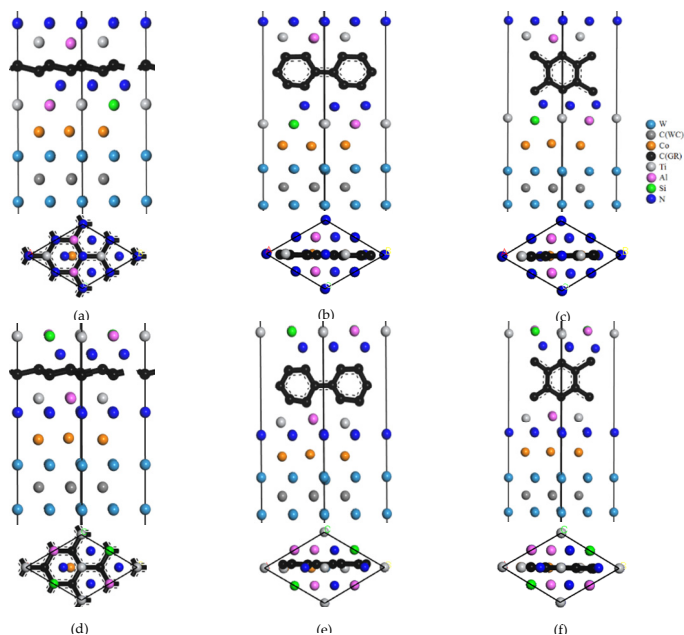


Figure S2. Interface models of coating doped with intrinsic graphene: (a) TiAlSiN/msGR/TiAlSiN_{Si}/WC-Co; (b) TiAlSiN/acGR/TiAlSiN_{Si}/WC-Co; (c) TiAlSiN/zzGR/TiAlSiN_{Si}/WC-Co; (d) TiAlSiN/msGR/TiAlSiN_N/WC-Co; (e) TiAlSiN/acGR/TiAlSiN_N/WC-Co; (f) TiAlSiN/zzGR/TiAlSiN_N/WC-Co.

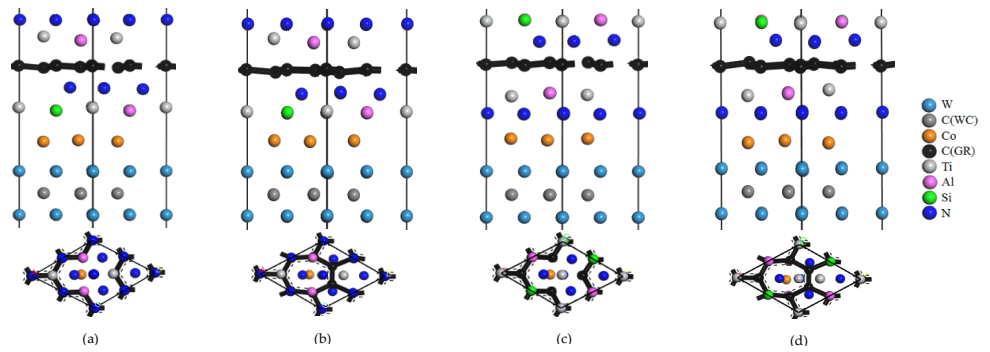


Figure S3. Interface models of coating doped with defective graphene: (a) TiAlSiN/svGR/TiAlSiN_{Si}/WC-Co; (b) TiAlSiN/tdGR/TiAlSiN_{Si}/WC-Co; (c) TiAlSiN/svGR/TiAlSiN_N/WC-Co; (d) TiAlSiN/tdGR/TiAlSiN_N/WC-Co.

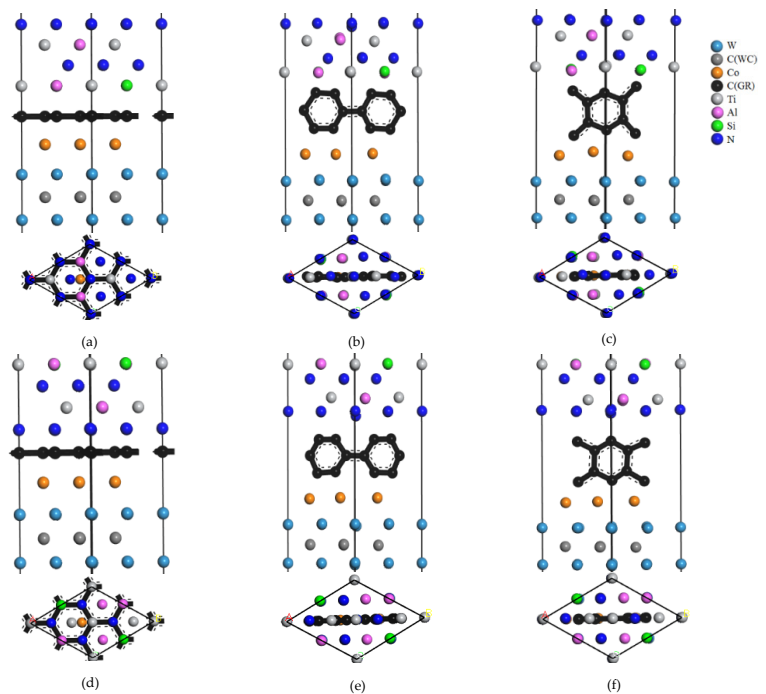


Figure S4. Interface models of coating/matrix interface doped with intrinsic graphene: (a) TiAlSiN_{Si}/msGR/WC-Co; (b) TiAlSiN_{Si}/acGR/WC-Co; (c) TiAlSiN_{Si}/zzGR/WC-Co; (d) TiAlSiN_N/msGR/WC-Co; (e) TiAlSiN_N/acGR/WC-Co; (f) TiAlSiN_N/zzGR/WC-Co.

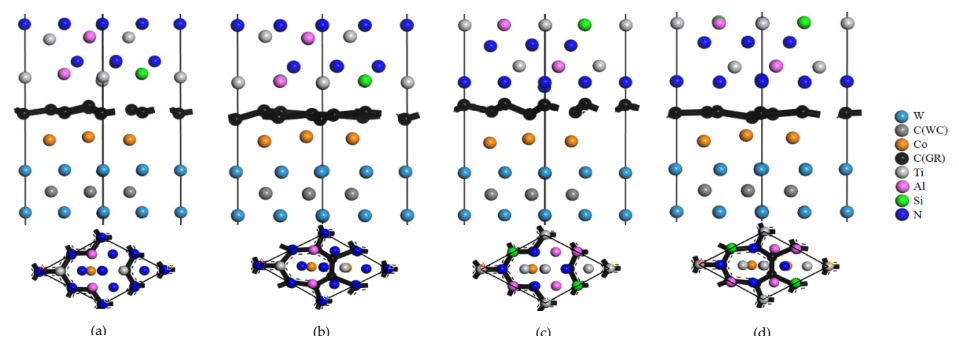


Figure S5. Interface models of coating/matrix interface doped with defective graphene: (a) TiAlSiN_{Si}/svGR/WC-Co; (b) TiAlSiN_{Si}/tdGR/WC-Co; (c) TiAlSiN_N/svGR/WC-Co; (d) TiAlSiN_N/tdGR/WC-Co.