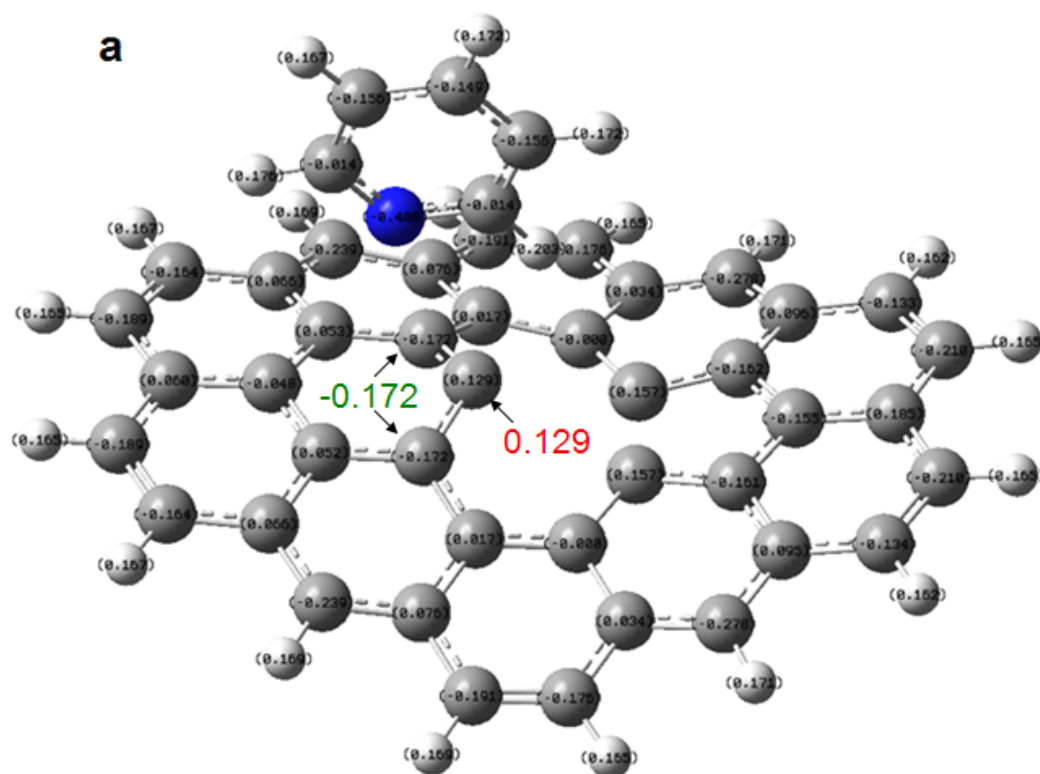




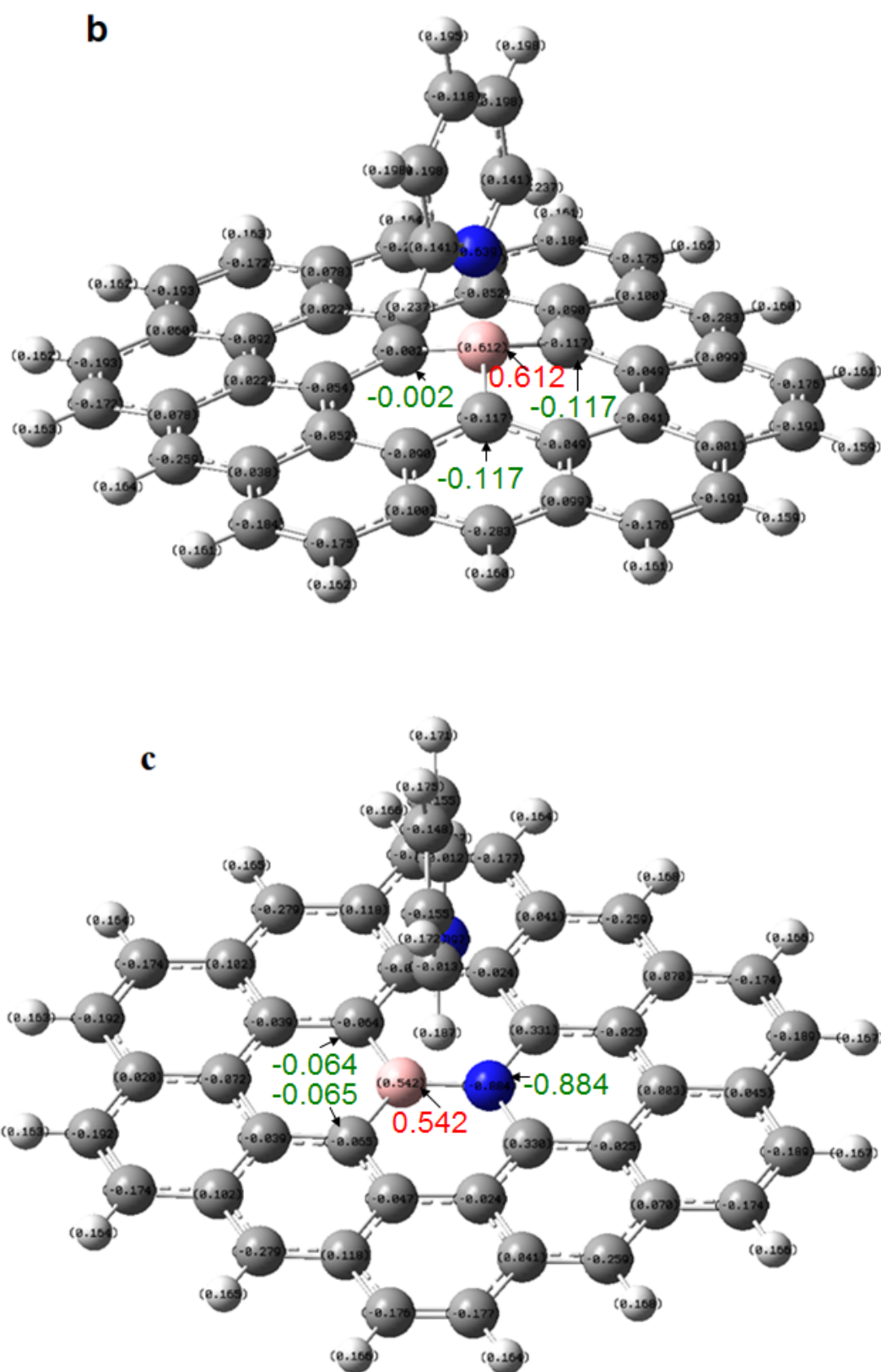


Figure S1. The calculated mulliken charge distributions of (a) pyridine-mono vacancy graphene, (b) pyridine-B substituted graphene, (c) pyridine-BN substituted graphene.