Supplementary Materials

Mechanochemical Synthesis of PdO_2 Nanoparticles Immobilized Over Silica Gel for Catalytic Suzuki–Miyaura Cross-Coupling Reactions Leading to the C-3 Modification of 1*H*-Indazole with Phenylboronic Acids

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S1. XPS measurement of Si 2p region for synthesized catalyst

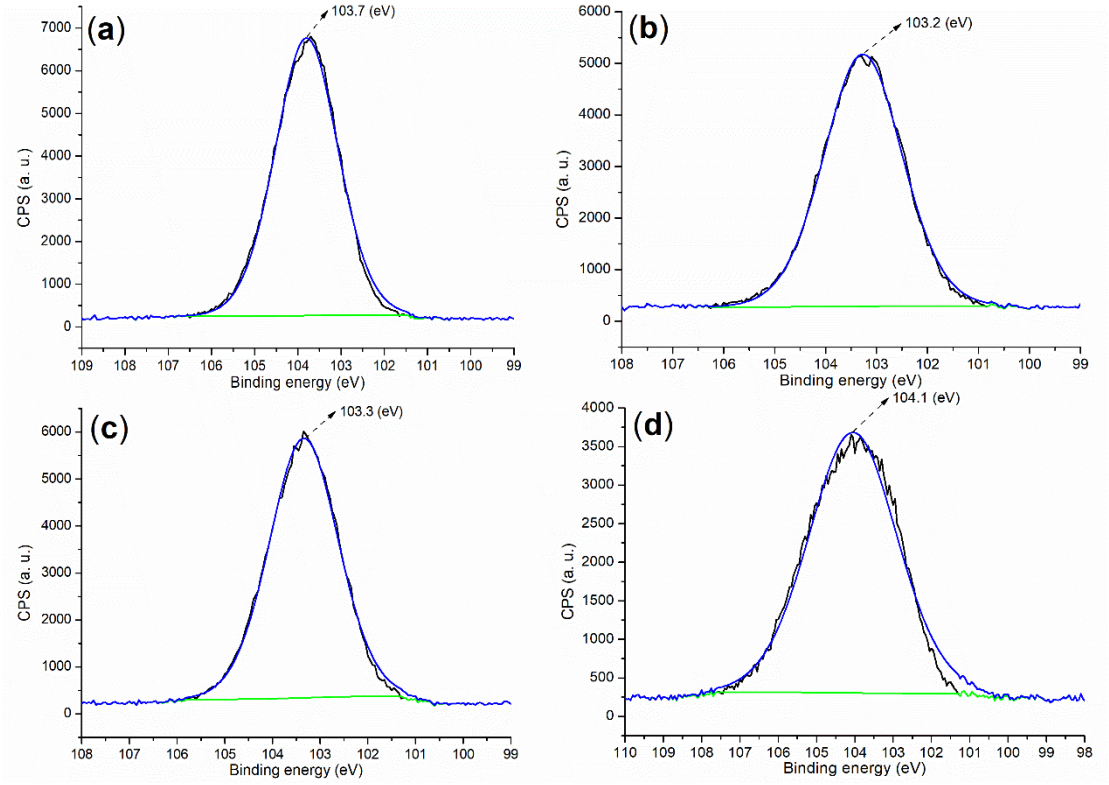


Figure S1. XPS measurement of Si 2p region for synthesized catalyst: (**a**) C0, (**b**) C1, (**c**) C2, (**d**) C3.

S2. XPS measurement of P 2p region for C3

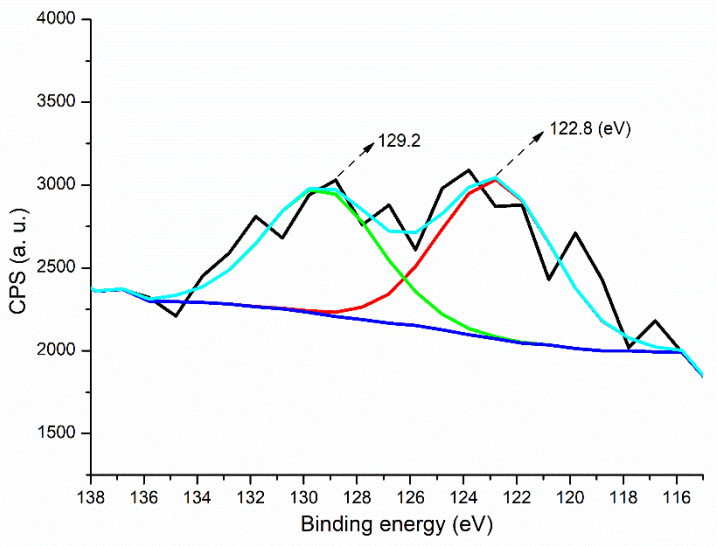


Figure S2. XPS measurement of P 2p region for C3.

S3. FT-IR spectra of synthesized catalysts

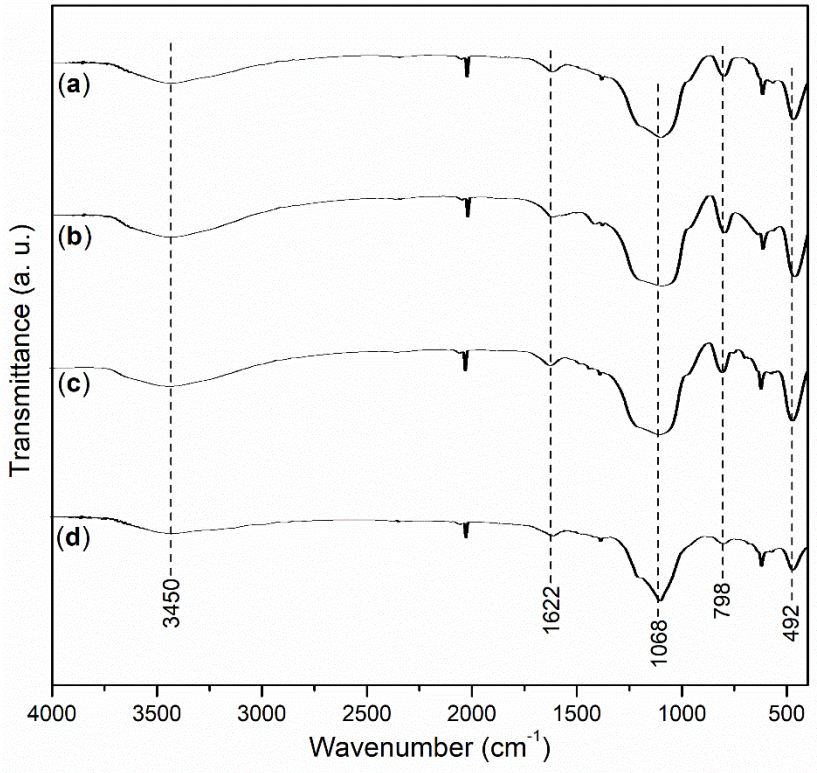


Figure S3. FT-IR spectra of synthesized catalysts: (**a**) C0, (**b**) C1, (**c**) C2, (**d**) C3.

S4. UV-Vis spectra of synthesized catalysts

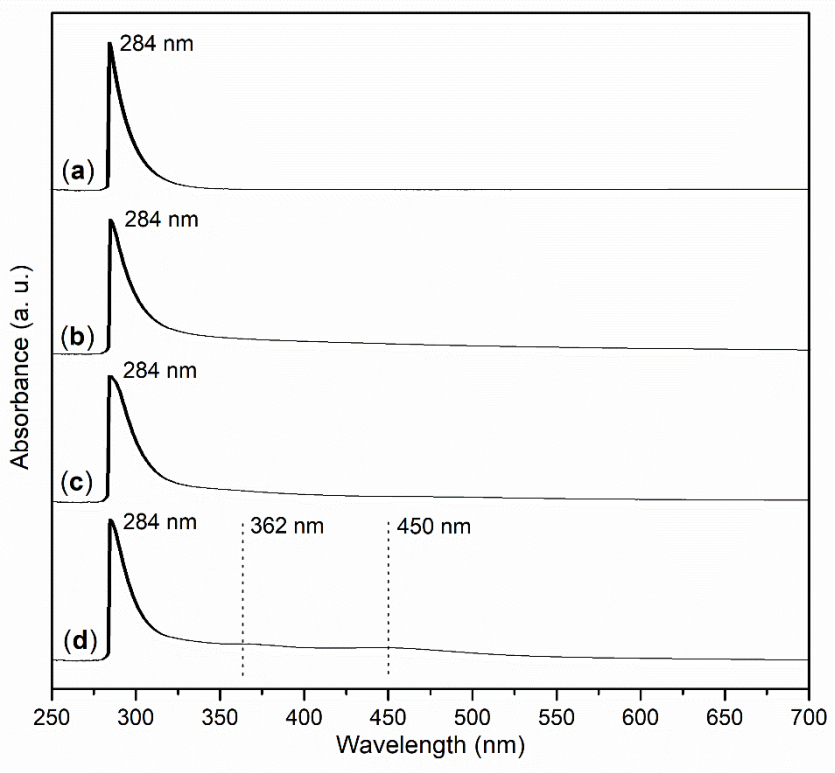


Figure S4. UV-Vis spectra of synthesized catalysts: (**a**) C0, (**b**) C1, (**c**) C2, (**d**) C3.

S5. ^{1}H NMR spectrum of 3-iodo-1*H*-indazole

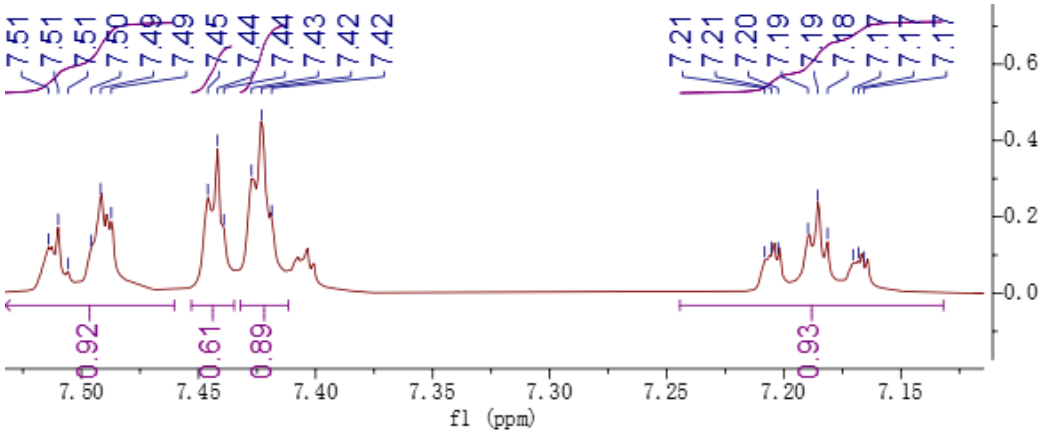


Figure S5. ^{1}H NMR spectrum of 3-iodo-1*H*-indazole.

S6. ^{13}C NMR spectrum of 3-iodo-1*H*-indazole

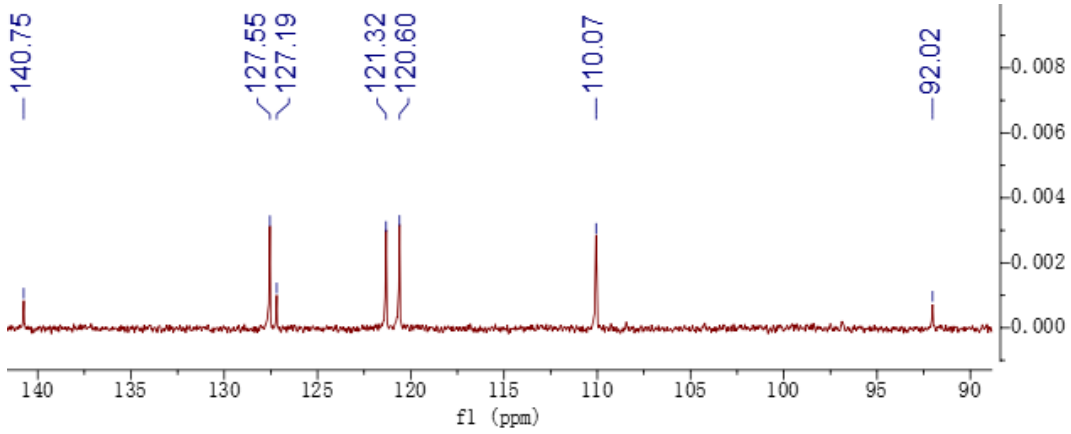


Figure S6. ^{13}C NMR spectrum of 3-iodo-1*H*-indazole.

S7. ^{1}H NMR spectrum of *tert*-butyl-3-iodo-1*H*-indazole-1-carboxylate (full scale)

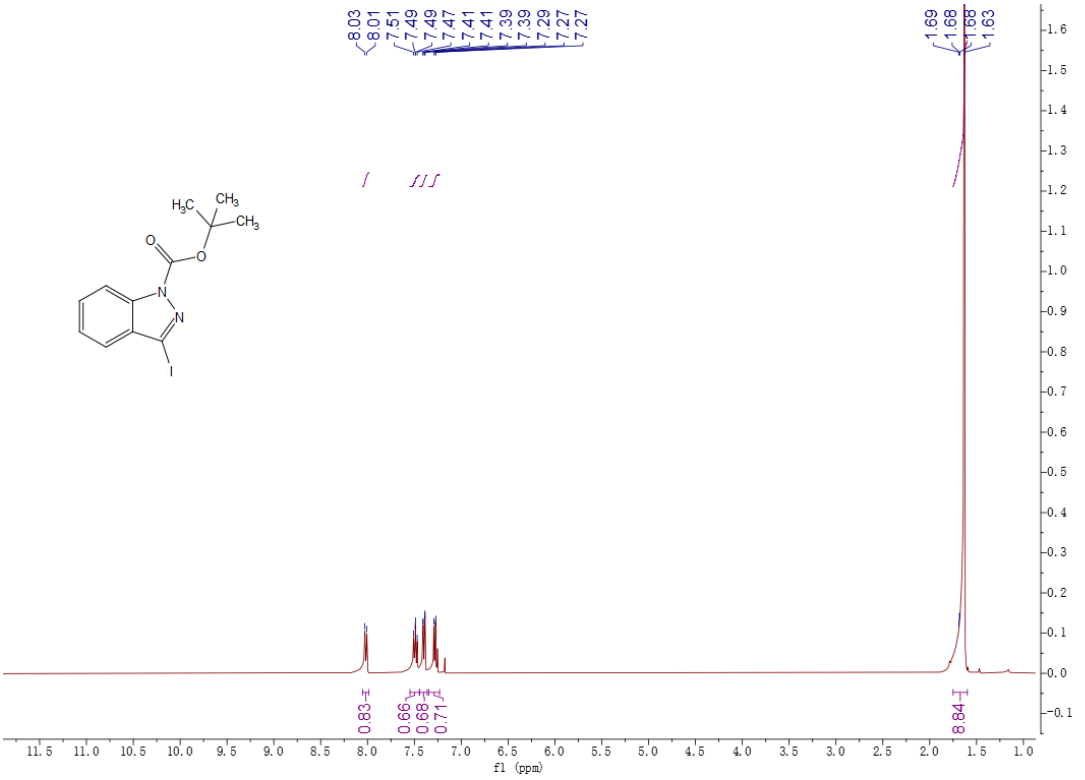


Figure S7. ^{1}H NMR spectrum of *tert*-butyl-3-iodo-1*H*-indazole-1-carboxylate (full scale).

S8. ^{1}H NMR spectrum of *tert*-butyl-3-iodo-1*H*-indazole-1-carboxylate (aromatic region)

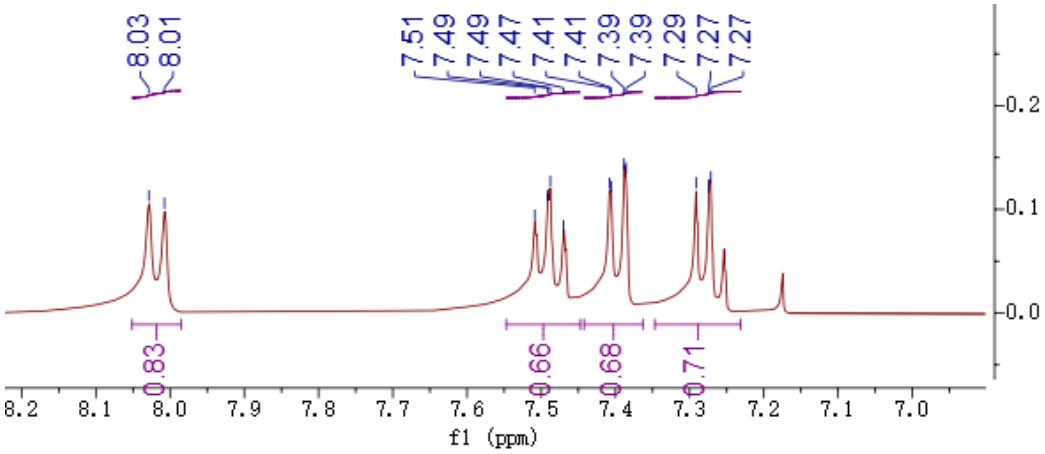


Figure S8. ^{1}H NMR spectrum of *tert*-butyl-3-iodo-1*H*-indazole-1-carboxylate (aromatic region).

S9. ^{1}H NMR spectrum of *tert*-butyl-3-(3-(methoxycarbonyl)phenyl)-1*H*-indazole-1-carboxylate (full scale)

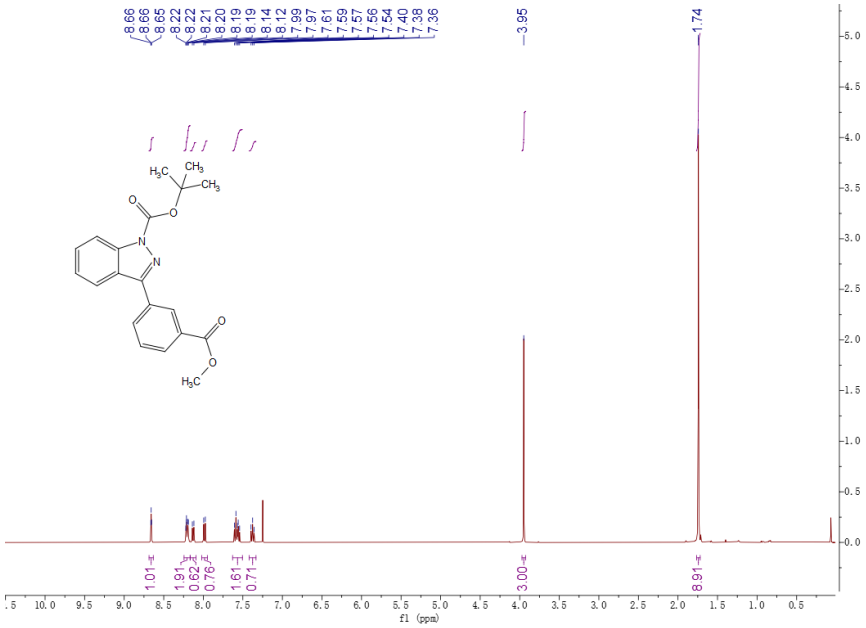


Figure S9. ^{1}H NMR spectrum of *tert*-butyl-3-(3-(methoxycarbonyl)phenyl)-1*H*-indazole-1-carboxylate (full scale).

S10. ^{1}H NMR spectrum of *tert*-butyl-3-(3-(methoxycarbonyl)phenyl)-1*H*-indazole-1-carboxylate (aromatic region)

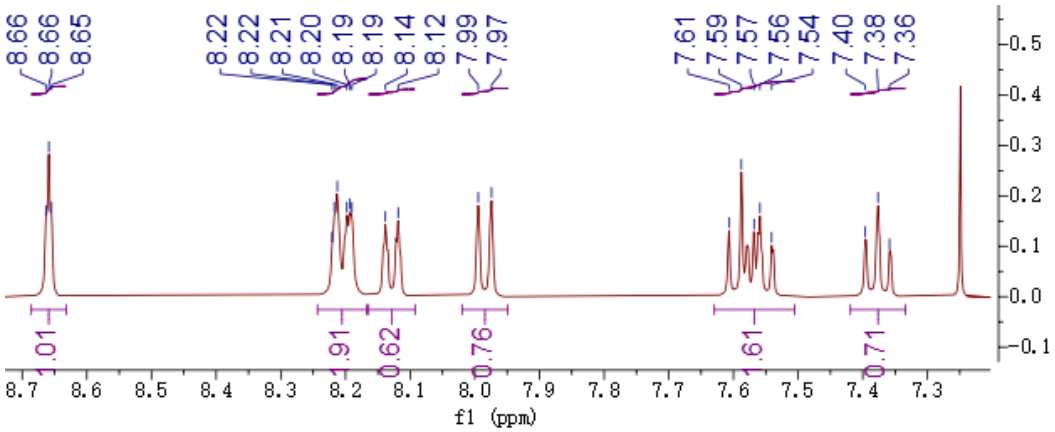


Figure S10. ^{1}H NMR spectrum of *tert*-butyl-3-(3-(methoxycarbonyl)phenyl)-1*H*-indazole-1-carboxylate (aromatic region).

S11. ^{1}H NMR spectrum of *tert*-butyl-3-(4-(methoxycarbonyl)phenyl)-1*H*-indazole-1-carboxylate (full scale)

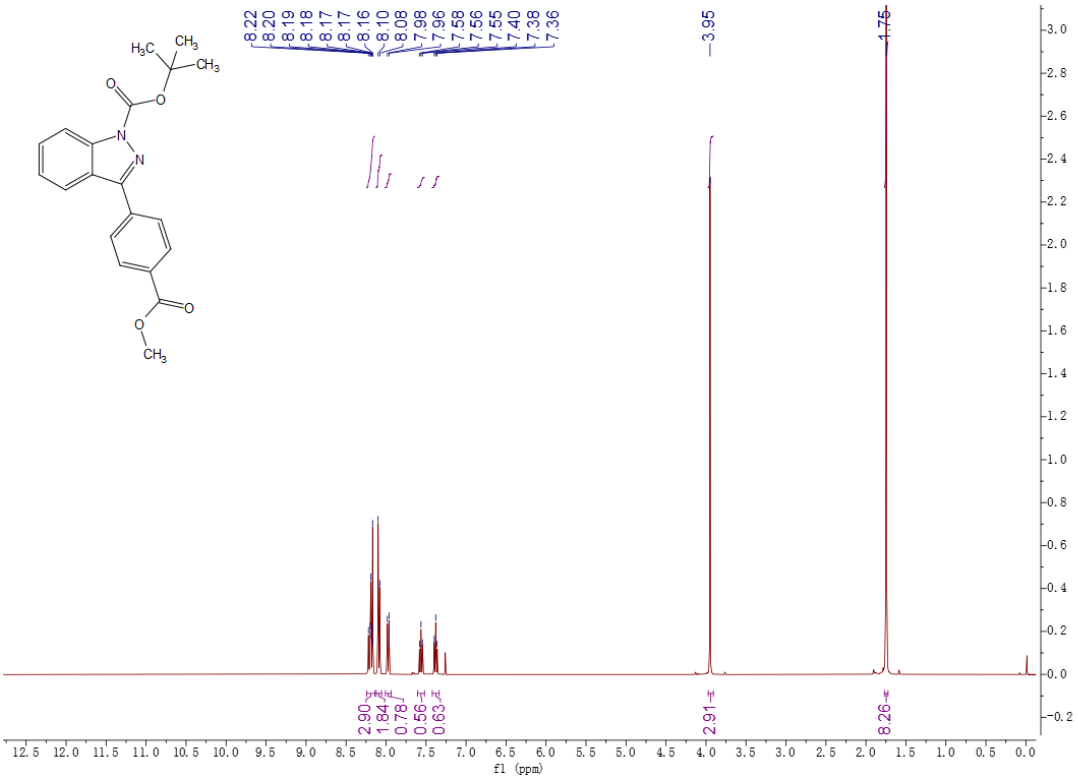


Figure S11. ^{1}H NMR spectrum of *tert*-butyl-3-(4-(methoxycarbonyl)phenyl)-1*H*-indazole-1- carboxylate (full scale).

S12. ^{1}H NMR spectrum of *tert*-butyl-3-(4-(methoxycarbonyl)phenyl)-1*H*-indazole-1-carboxylate (aromatic region)

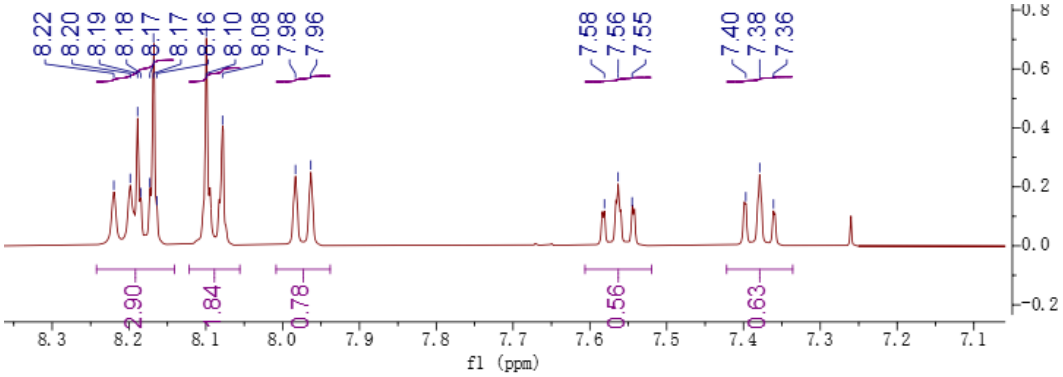


Figure S12. ^{1}H NMR spectrum of *tert*-butyl-3-(4-(methoxycarbonyl)phenyl)-1*H*-indazole-1- carboxylate (aromatic region).