Supporting information's

Selective photo-oxidative coupling of amines to form C-N bond using post synthetic modification of MIL-68-NH_2 with metal acetylacetonate

Mahmoud El-Shahat[a*], Ahmed R.Wassel[b], Reda M. Abdelhameed[c*]

[a]Photochemistry Department, Chemical Industries Research Institute, National Research Centre, Scopus affiliation ID 60014618, 33 EL Buhouth St., Dokki, Giza 12622, Egypt. E-mail address: mahmoudelshahat@gmail.com

[b]Electron Microscope and Thin Film Department, Physics Research Institute, National Research Center, 33 El-Bohouth St., Dokki, Giza 12622, Egypt.

[c]Applied Organic Chemistry Department, Chemical Industries Research Institute, National Research Centre, Scopus affiliation ID 60014618, 33 EL Buhouth St., Dokki, Giza, 12622, Egypt. E-mail address:reda_nrc@yahoo.com.

Table S1: Metal contents (%) and elemental analysis for the modified MOFs.

Sample	In	Ni	Co	Fe	C	H	N
MIL-68-NH2	37.04± 0.42	--	--	--	31.00	1.63	4.52
MIL-68-AC-Ni	34.12± 0.61	3.49± 0.04	--	--	32.13	1.38	4.16
MIL-68-AC-Co	34.12 ± 0.02	--	3.50± 0.05	--	32.12	1.38	4.16
MIL-68-AC-Fe	34.18± 0.57			3.32± 0.02	32.18	1.38	4.17

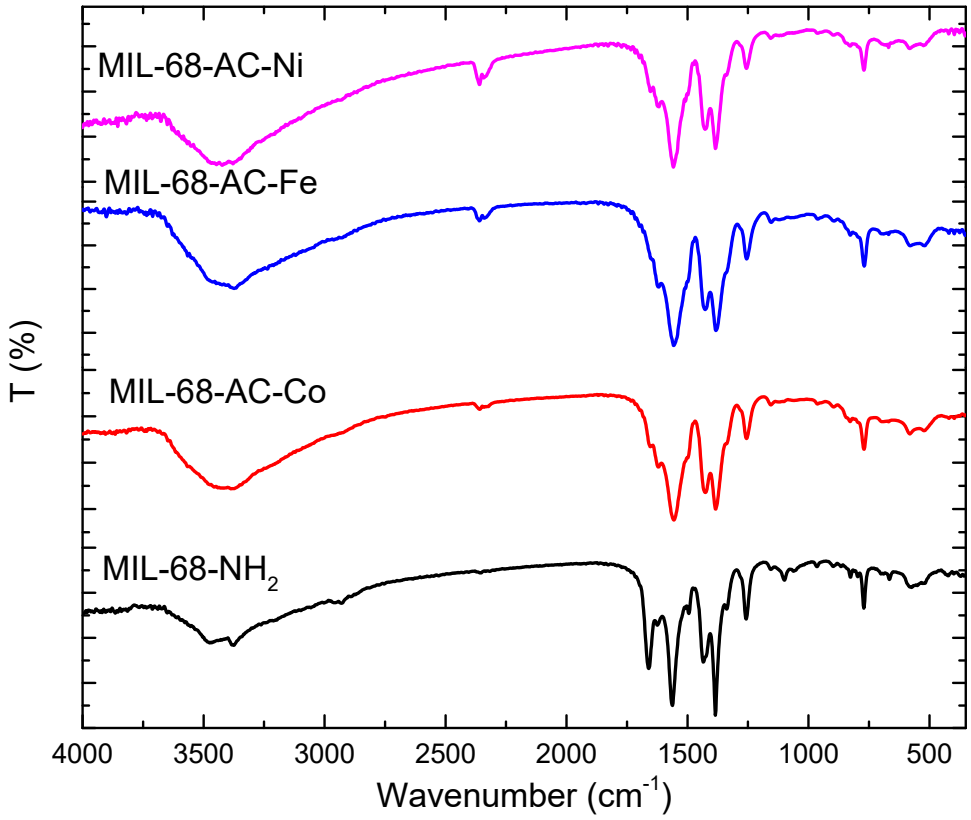

Figure S1. FTIR of MIL-68-NH2, MIL-68-AC-Co, MIL-68-Ac-Fe and MIL-68-AC-Ni

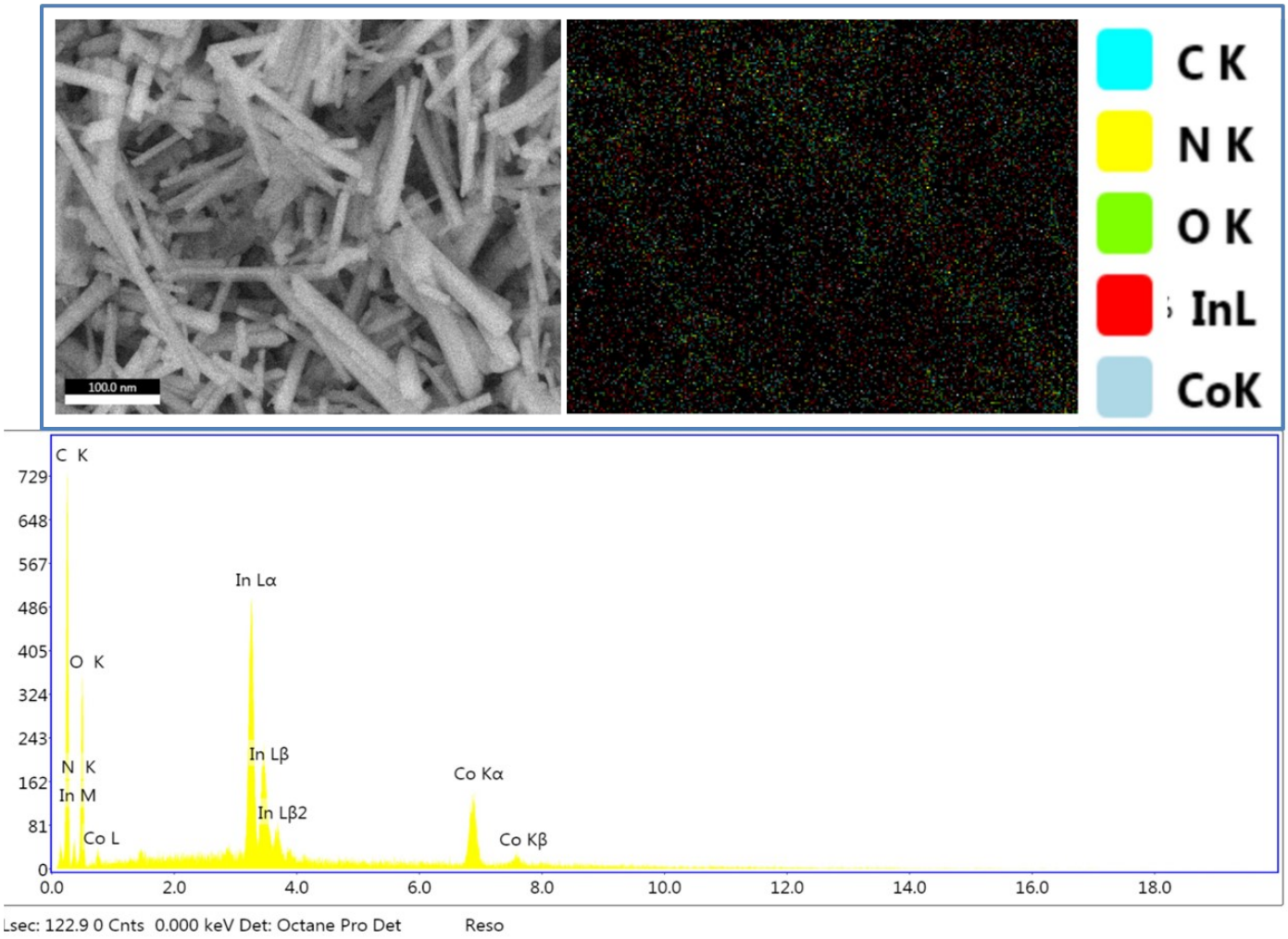

Figure S2 EDX and SEM-mapping of MIL-68-AC-Co

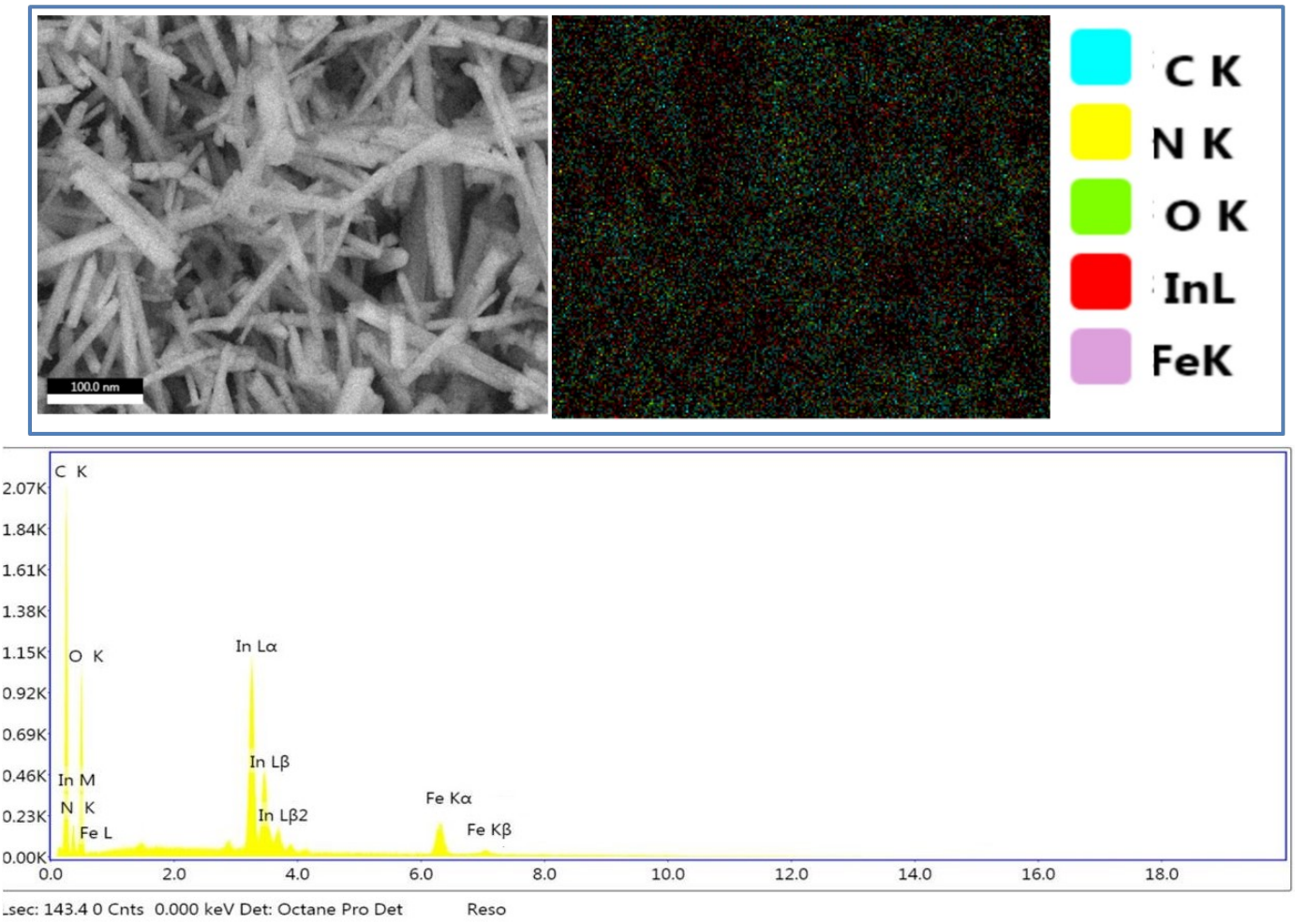

Figure S3 EDX and SEM-mapping of MIL-68-AC-Fe

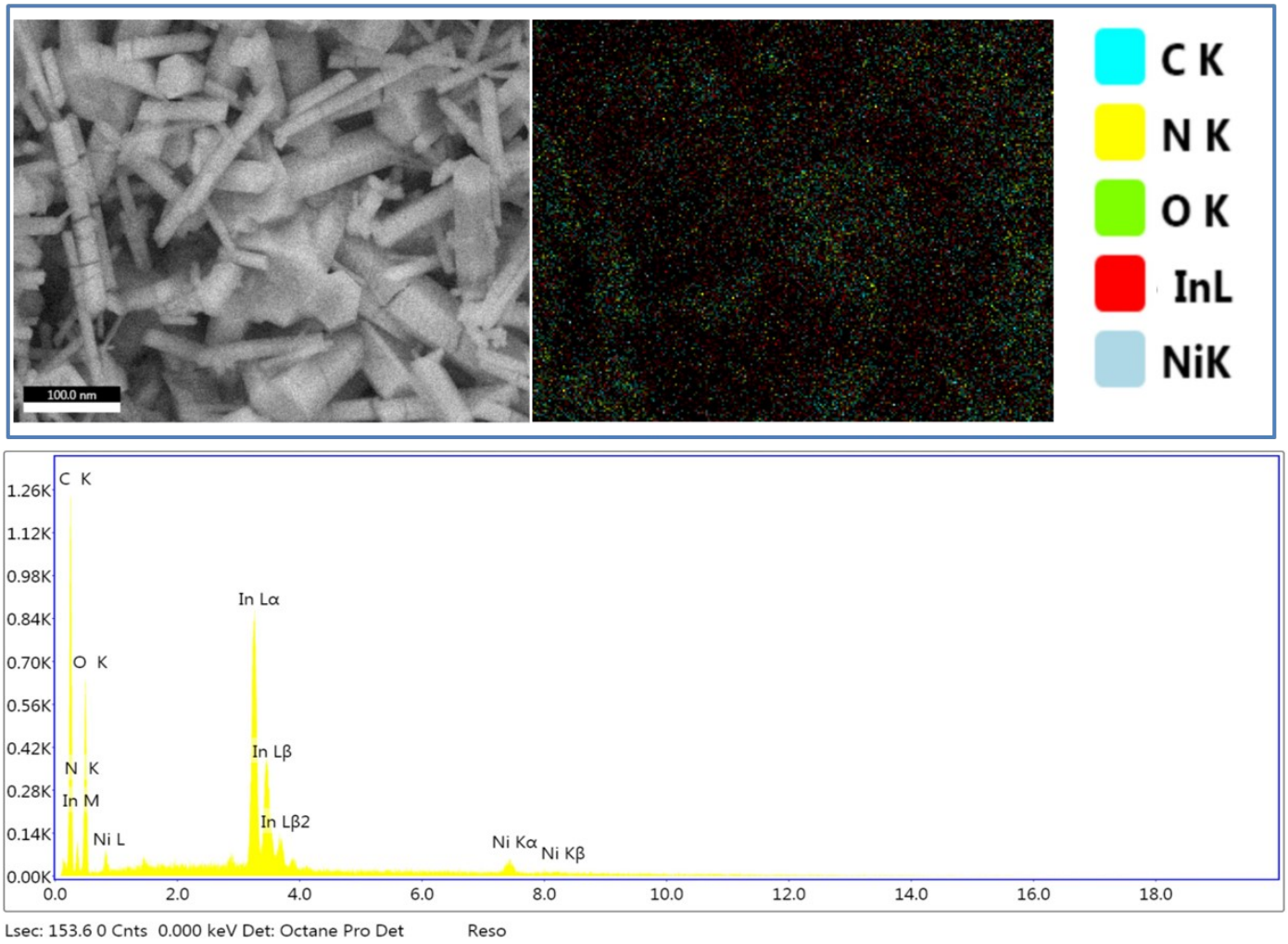

Figure S4 EDX and SEM-mapping of MIL-68-AC-Ni

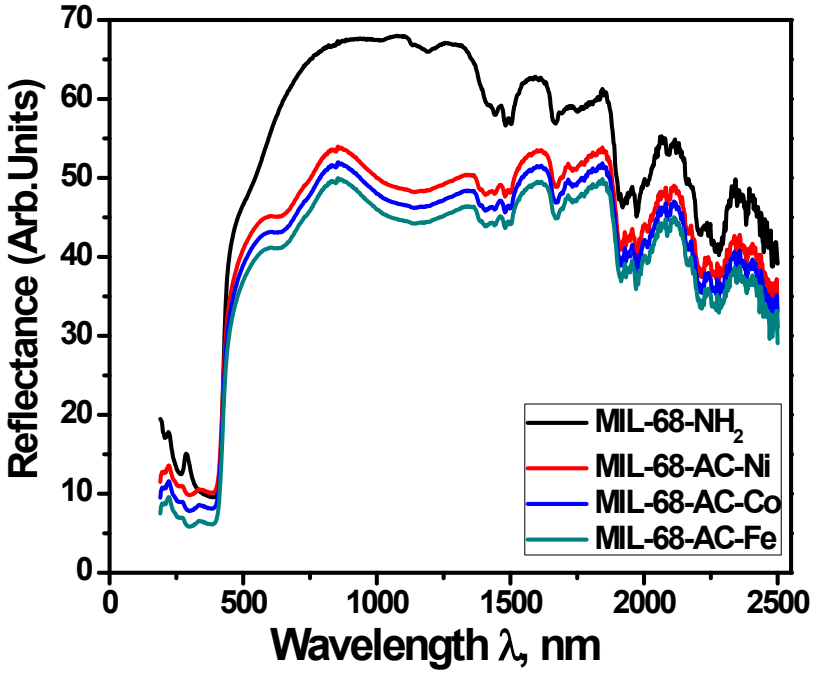

Figure S5. UV-VIS DRS of MIL-68-NH_2, MIL-68-AC-Ni, MIL-68-AC-Co, and MIL-68-AC-Fe

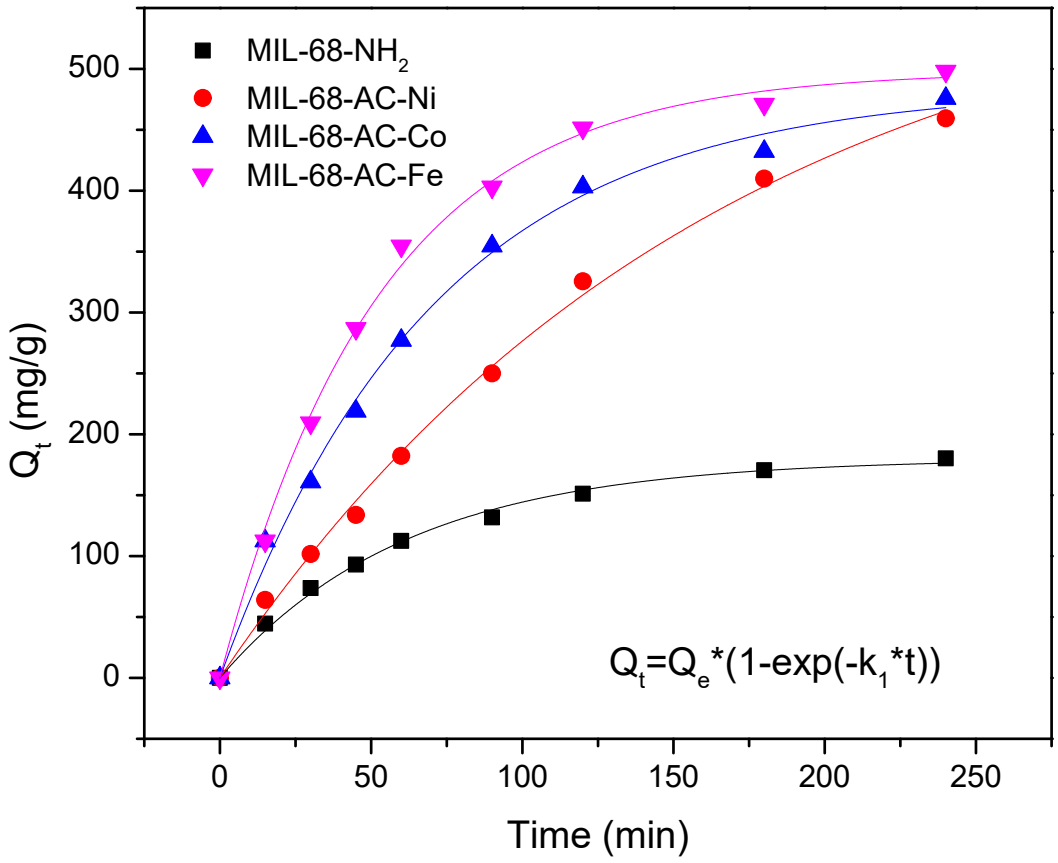

Figure S6. The fitting with non-liner first order model

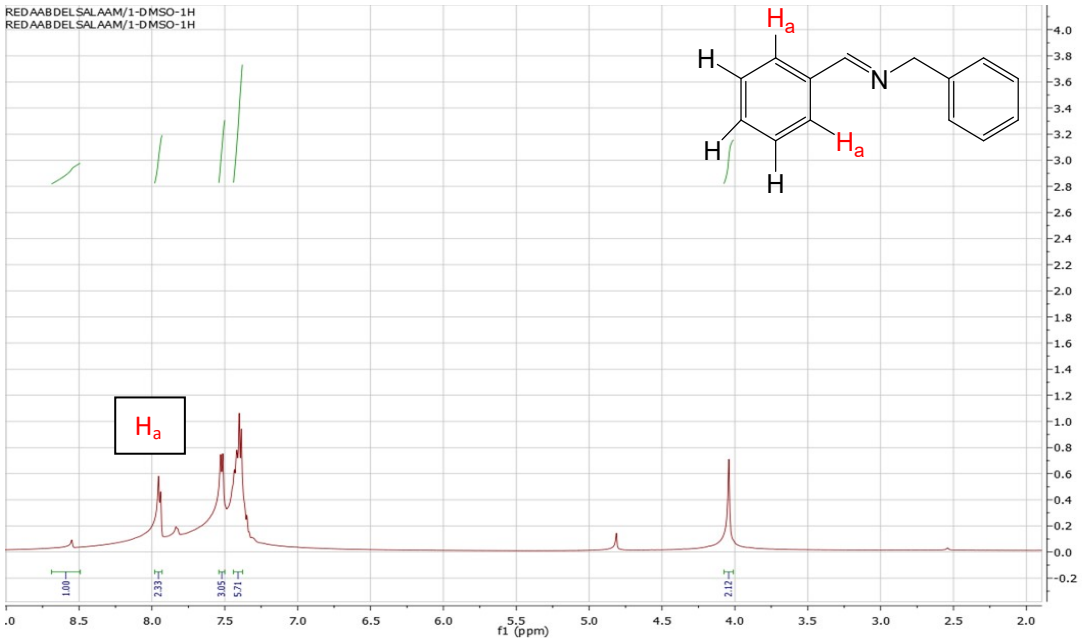

Figure S7. [1]HNMR of N-(Benzylidene)benzylamine

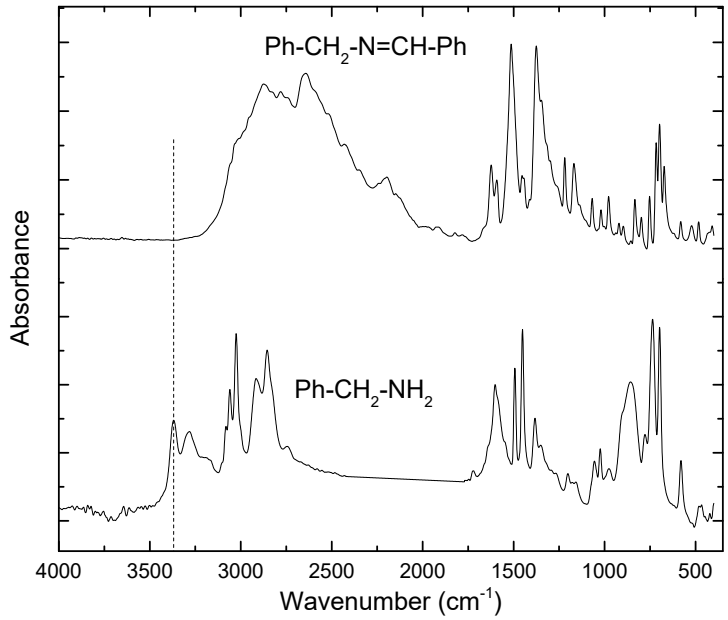

Figure S8. FTIR of self-coupling benzylamine

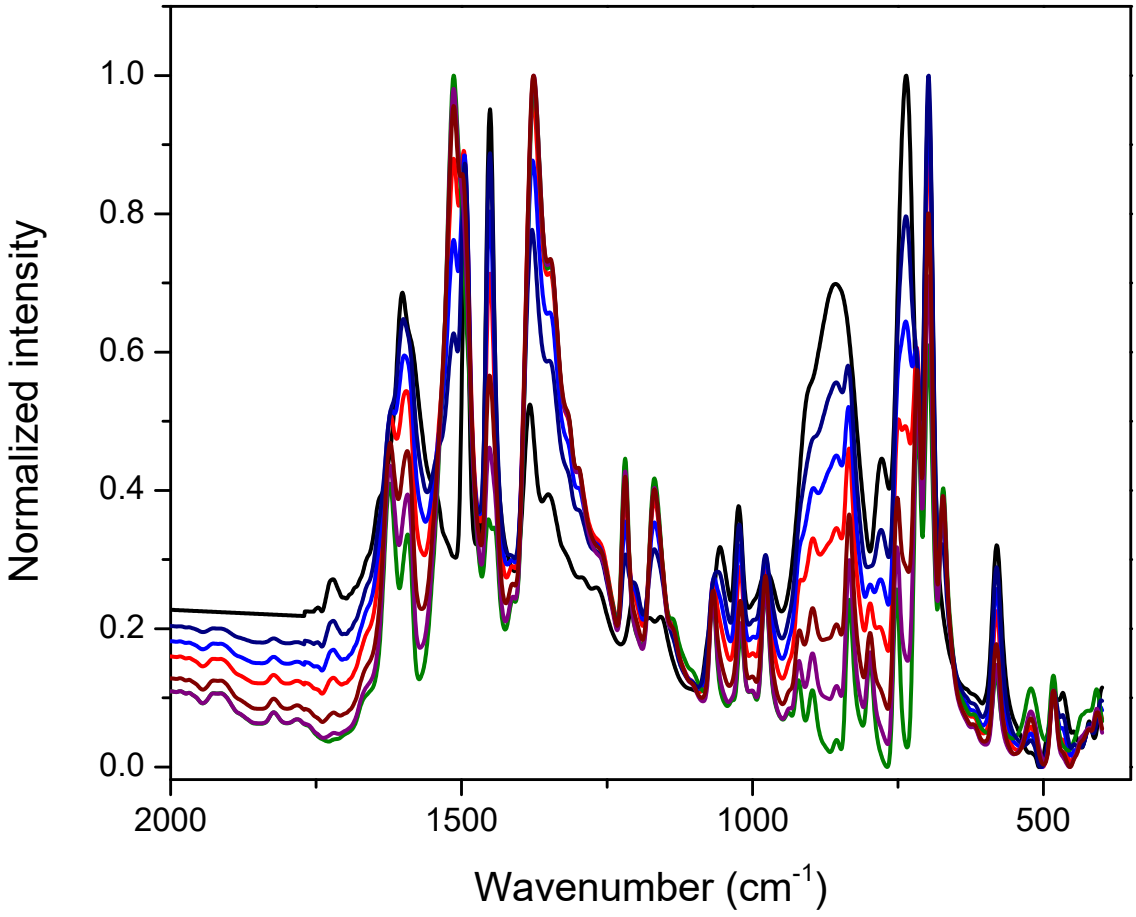

Figure S9. FTIR of self-coupling benzylamine