

Fig.S1 FTIR spectra of dinitro compounds and diamines (a) 4,4'-(4-nitro-2trifluoromethylphenoxy)diphenylethylenedione, (b) 2-phenyl-4,5-bis(4-(4-nitro-2trifluoromethylphenoxy)phenyl)imidazole, 2-phenyl-4,5-bis(4-(4-amino-2trifluoromethylphenoxy)phenyl)imidazole, (c) 2-(4'-methylphenyl)-4,5-bis(4-(4-nitro-2trifluoromethylphenoxy)phenyl)imidazole, 2-(4-methylphenyl)-4,5-bis(4-(4-amino-2trifluoromethylphenoxy)phenyl)imidazole, (d) 2-(4-Trifluoromethylphenyl)-4,5-bis(4-(4-amino-2trifluoromethylphenoxy)phenyl)imidazole, 2-(4-Trifluoromethylphenyl)-4,5-bis(4-(4-amino-2trifluoromethylphenoxy)phenyl)imidazole, 2-(4-Trifluoromethylphenyl)-4,5-bis(4-(4-amino-2trifluoromethylphenoxy)phenyl)imidazole, 2-(4-Trifluoromethylphenyl)-4,5-bis(4-(4-amino-2trifluoromethylphenoxy)phenyl)imidazole, 2-(4-Trifluoromethylphenyl)-4,5-bis(4-(4-amino-2trifluoromethylphenoxy)phenyl)imidazole, 2-(4-Trifluoromethylphenyl)-4,5-bis(4-(4-amino-2trifluoromethylphenoxy)phenyl)imidazole, 2-(4-Trifluoromethylphenyl)-4,5-bis(4-(4-amino-2trifluoromethylphenoxy)phenyl)imidazole, 2-(4-Trifluoromethylphenyl)-4,5-bis(4-(4-amino-2trifluoromethylphenoxy)phenyl)imidazole, 2-(4-Trifluoromethylphenyl)-4,5-bis(4-(4-amino-2trifluoromethylphenoxy)phenyl)imidazole













Fig.S2 <sup>1</sup>H NMR spectra of dinitro compounds and diamines (a) 4,4'-(4-nitro-2-trifluoromethylphenoxy)diphenylethylenedione, (b) 2-phenyl-4,5-bis(4-(4-nitro-2-trifluoromethylphenoxy)phenyl)imidazole, (c) 2-phenyl-4,5-bis(4-(4-amino-2-trifluoromethylphenoxy)phenyl) imidazole, (d) 2-(4'-methylphenyl)-4,5-bis(4-(4-amino-2-trifluoromethylphenoxy)phenyl)imidazole, (e) 2-(4-methylphenyl)-4,5-bis(4-(4-amino-2-trifluoromethylphenoxy)phenyl)imidazole, (f) 2-(4-Trifluoromethylphenyl)-4,5-bis(4-(4-amino-2-trifluoromethylphenoxy)phenyl)imidazole, (g) 2-(4-Trifluoromethylphenyl)-4,5-bis(4-(4-amino-2-trifluoromethylphenoxy)phenyl)imidazole