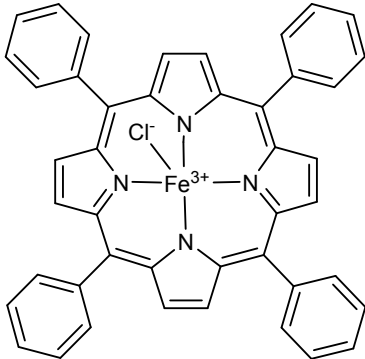
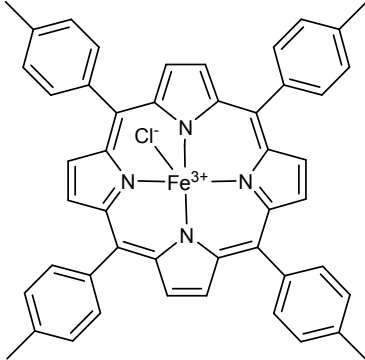
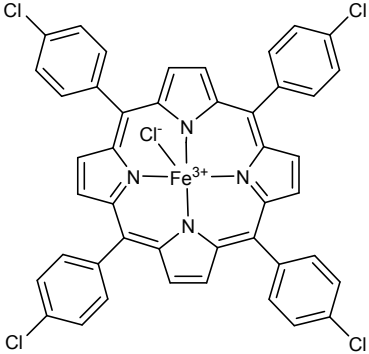
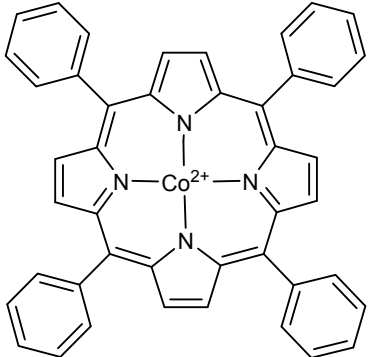
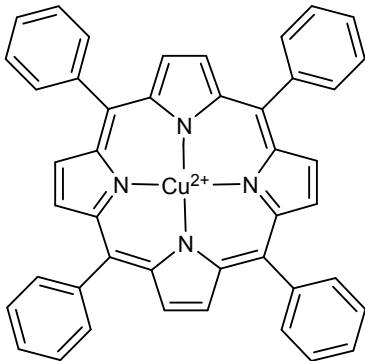
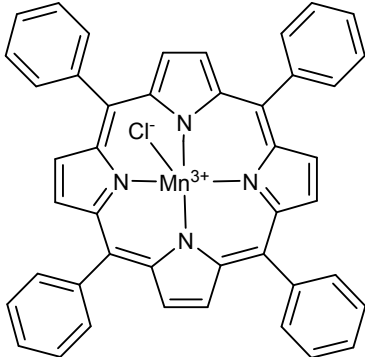
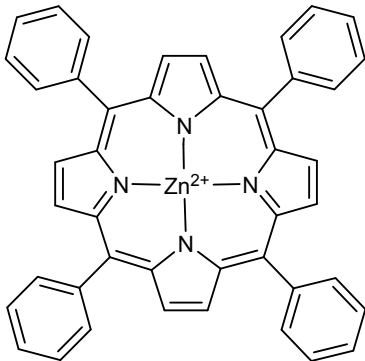
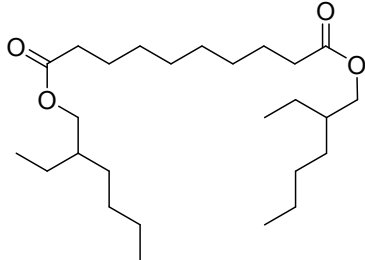


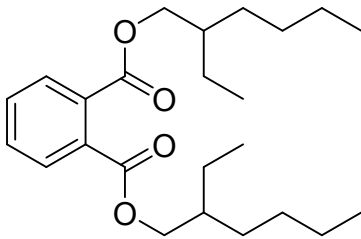
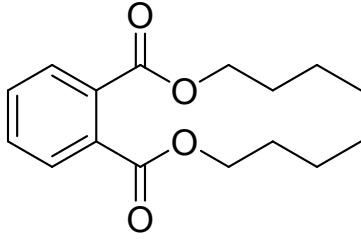
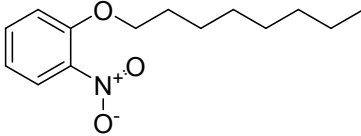
Table S1 Comprehensive list of functional materials and chemicals with CAS Registry Numbers and structure

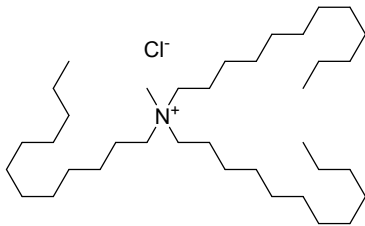
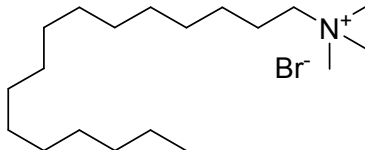
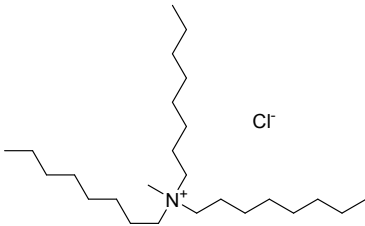
Category	Chemical (Full Name)	Abbreviation	Structure	CAS No.
Ionophores	Iron(III) <i>meso</i> -tetraphenylporphine chloride	Fe(III)TPPCl		16456-81-8
	5,10,15,20-tetrakis(4-methylphenyl)porphyrinatoiron(III) chloride	Fe(III)TMPPCl		19496-18-5

Category	Chemical (Full Name)	Abbreviation	Structure	CAS No.
	5,10,15,20-tetrakis(p-chlorophenyl)porphyrin chloride iron(III)	Fe(III)TCIPPCl		36965-70-5
	Cobalt(II) Tetraphenylporphyrin	Co(II)TPP		14172-90-8

Category	Chemical (Full Name)	Abbreviation	Structure	CAS No.
	Copper(II) Tetraphenylporphyrin	Cu(II)TPP		14172-91-9
	Manganese(III) tetraphenylporphine chloride	<i>meso</i> - Mn(III)TPPCl		32195-55-4

Category	Chemical (Full Name)	Abbreviation	Structure	CAS No.
	Zinc(II) Tetraphenylporphyrin	Zn(II)TPP		14074-80-7
Plasticizers	Bis(2-ethylhexyl) sebacate	DOS		122-62-3

Category	Chemical (Full Name)	Abbreviation	Structure	CAS No.
	Diethylphthalate	DEP		117-81-7
	Dibutyl phthalate	DBP		84-74-2
	<i>ortho</i> -nitrophenyloctyl ether	NPOE		37682-29-4

Category	Chemical (Full Name)	Abbreviation	Structure	CAS No.
Ionic Additives	Tridodecylmethylammonium chlorid	TDMACl		7173-54-8
	Hexadecyl trimethyl ammonium bromide	CTAB		57-09-0
	Methyltrioctylammonium chloride	MTOACl		5137-55-3
Polymer Matrix	High molecular weight Poly(vinyl chloride)	PVC		9002-86-2
Solvent	Tetrahydrofuran	THF		109-99-9