Electronic Supplementary Information

Mono-, tri- and polynuclear copper(II) complexes of Schiff-base ligands: Synthesis, characterization and catalytic activity towards alcohol oxidation

Aradhita Bhattacharjee,[a] Shibashis Halder,[a] Koushik Ghosh,[a] Corrado Rizzoli[b] and Partha Roy*[,a]

[a] Department of Chemistry, Jadavpur University, Jadavpur, Kolkata-700 032, India
E-mail: proy@chemistry.jdvu.ac.in

[b] Universita' degli Studi di Parma, Dipartimento S.C.V.S.A., Parco Area delle Scienze 17/A, I-43124 Parma, Italy

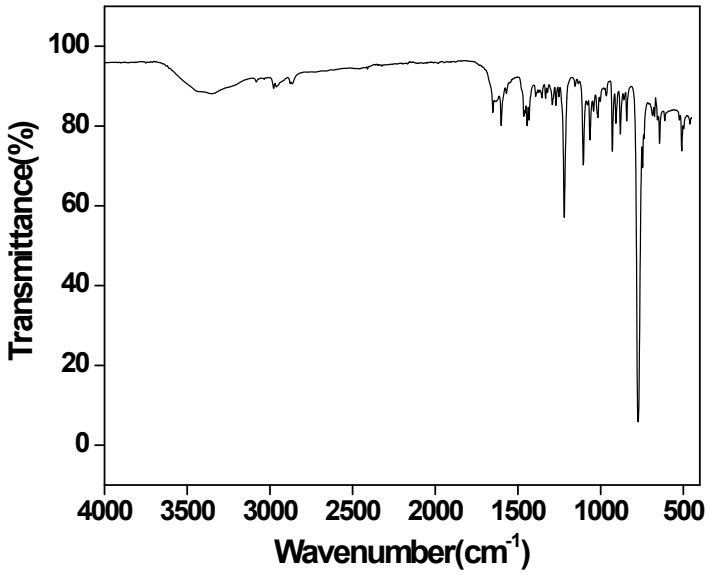

Fig. s1: FT-IR of complex **1**

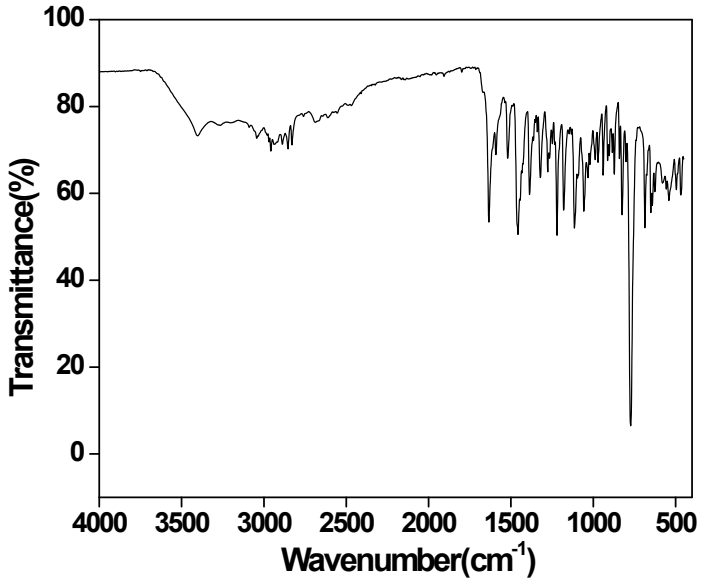

Fig. s2: FT-IR of complex **2**

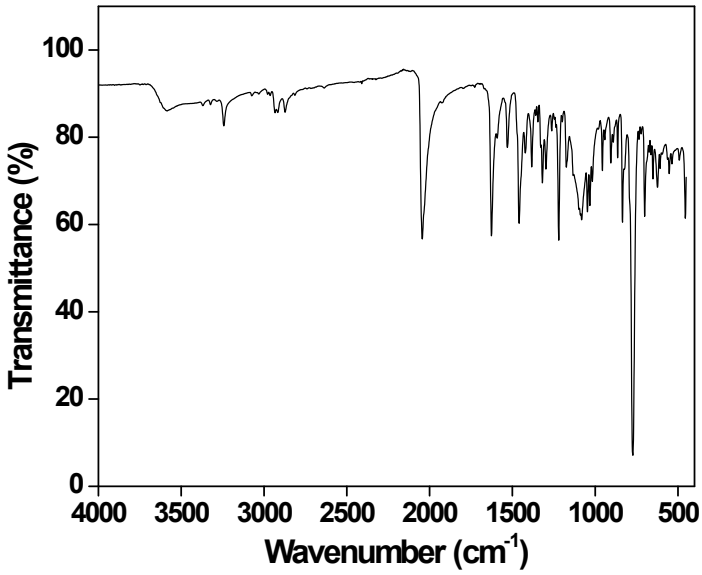

Fig. s3: FT-IR of complex **3**

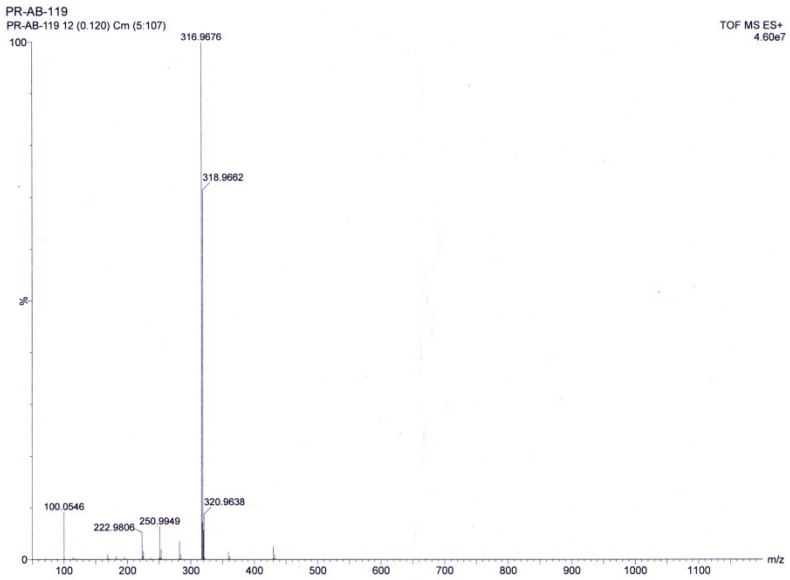

Fig. s4: ESI-mass spectrum of complex **1** in methanol

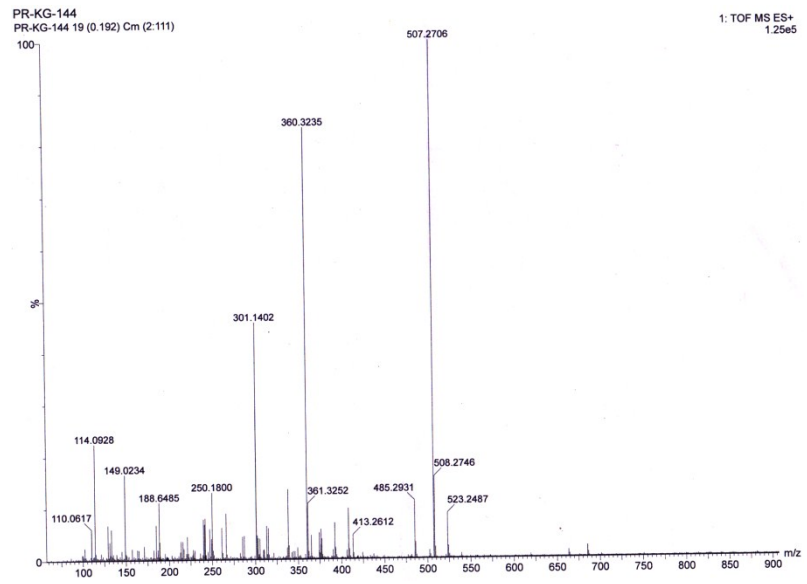

Fig. s5: ESI-mass spectrum of complex **2** in methanol

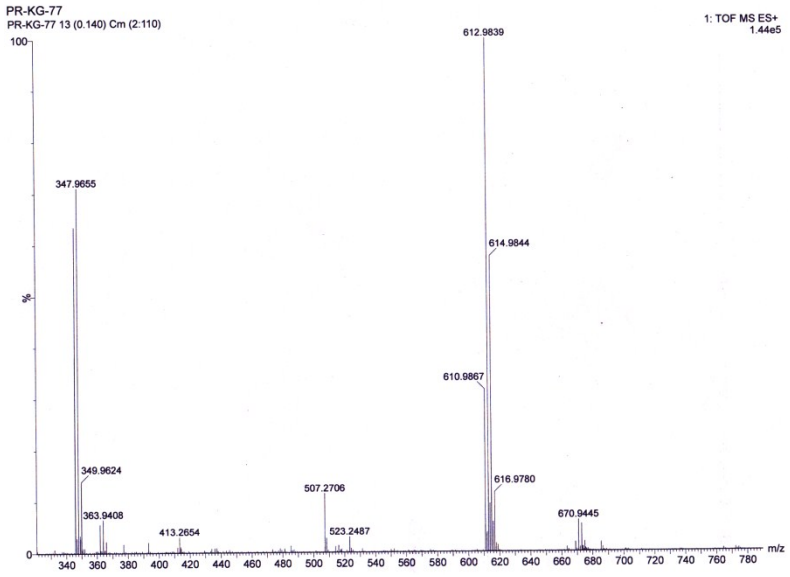

Fig. s6: ESI-mass spectrum of complex **3** in methanol

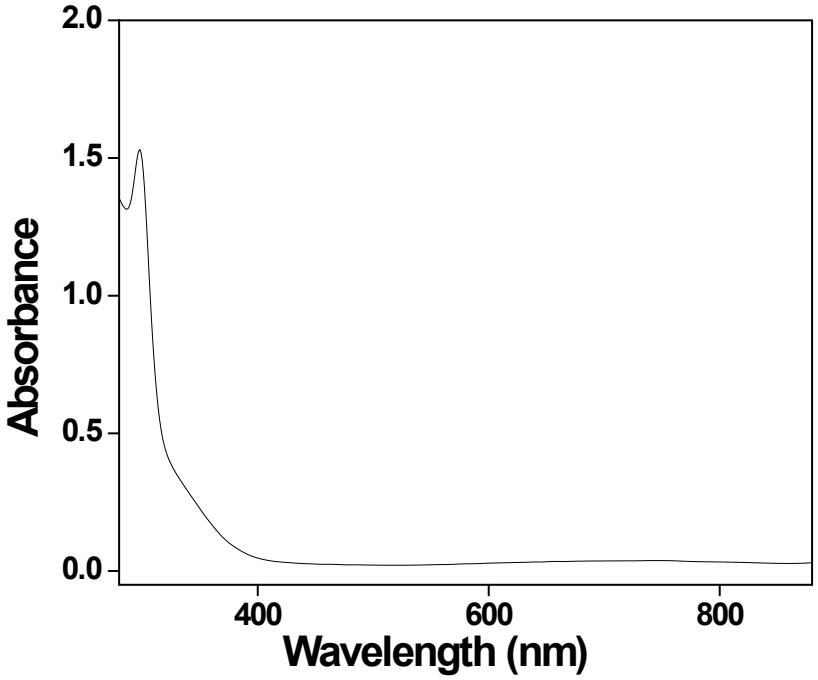

Fig. s7: UV-vis spectrum of complex **1** in methanol at room temperature

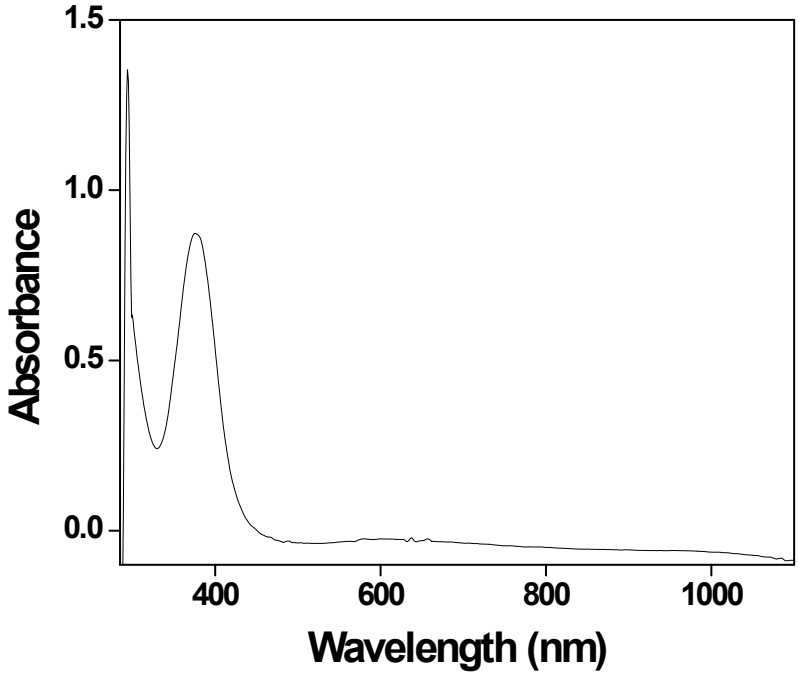

Fig. s8: UV-vis spectrum of complex **2** in methanol at room temperature

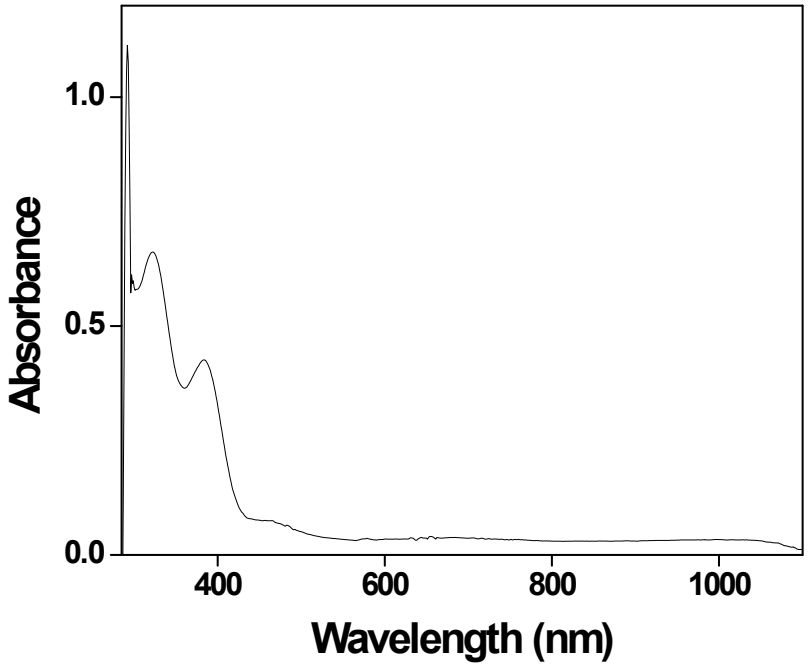

Fig. s9: UV-vis spectrum of complex **3** in methanol at room temperature

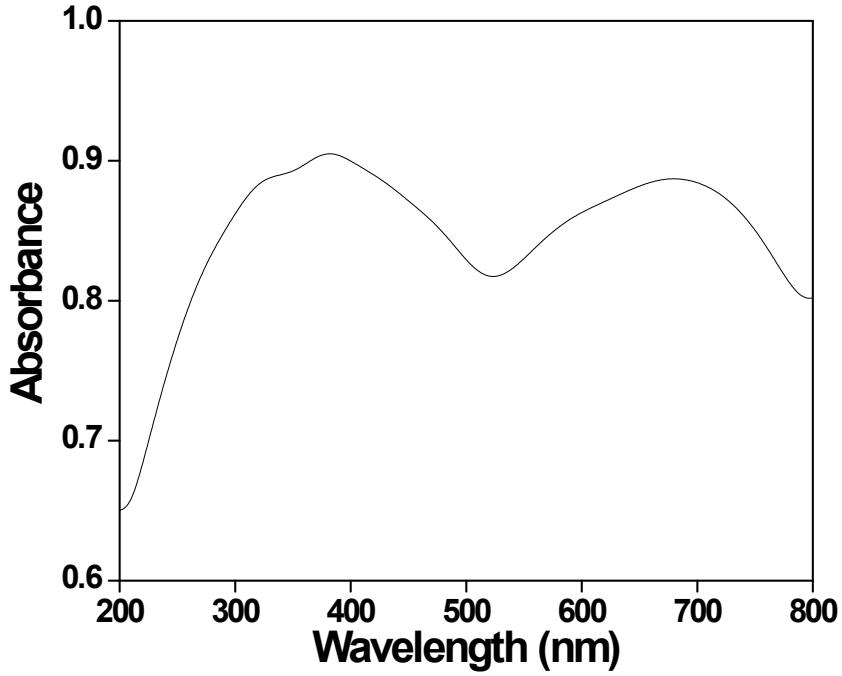

Fig. s10: UV-vis spectrum of complex **2** in solid state at room temperature

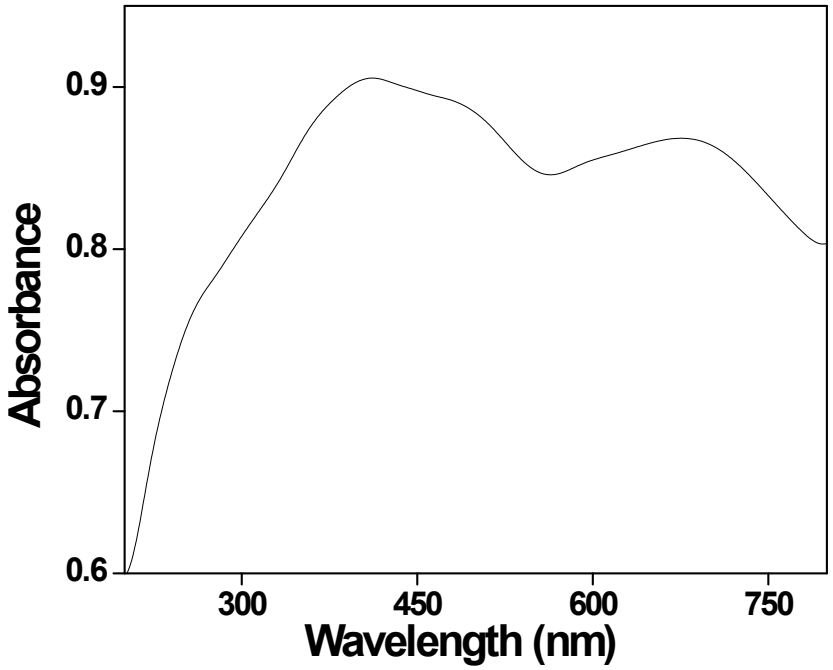

Fig. s11: UV-vis spectrum of complex **3** in solid state at room temperature

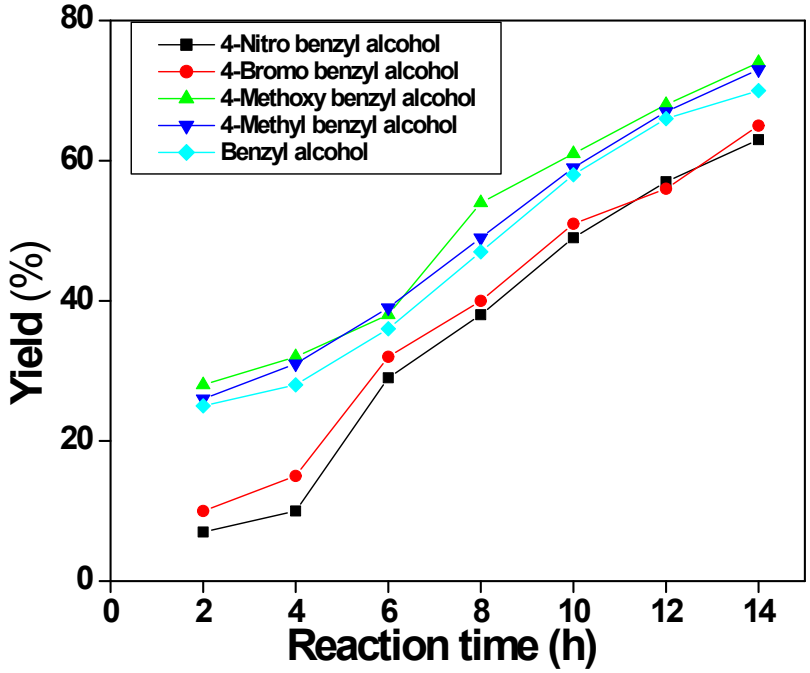

Fig. s12: Plot of yield vs reaction time for complex **2**.

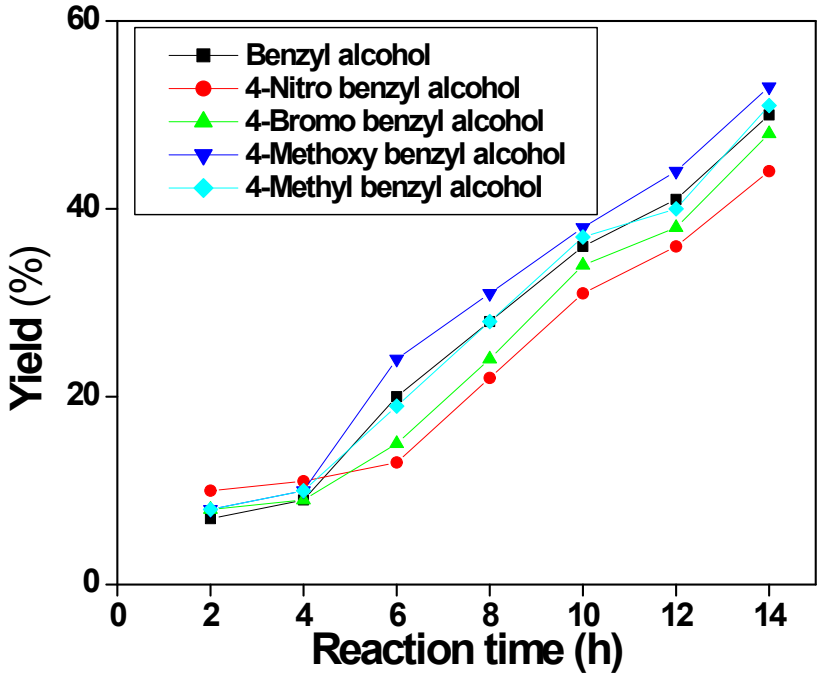

Fig. s13: Plot of yield vs reaction time for complex **3**.

Table S1. Hydrogen bonding geometry (Å, °) for complex **1**.

D–H··· A	D–H	H···A	D···A	∠ D–H···A
C24–H24A...Cl3	0.97	2.77	3.430(9)	126.1
C2–H2...O1^{i}	0.93	2.55	3.257(12)	132.8
C7–H7A...Cl1^{ii}	0.97	2.79	3.490(12)	130.0
C11–H11A...Cl4^{iii}	0.97	2.83	3.768(10)	163.8
C14–H14...O2^{iv}	0.93	2.54	3.268(11)	135.3
Symmetry codes: (i) 1/2+x, 1-y, z; (ii) x, -1+y,z; (iii) 1/2-x, 1+y, -1/2+z; (iv) -0.5+x, -y, z.				

Table S2. Hydrogen bonding geometry (Å, °) for complex **2**.

D–H··· A	D–H	H···A	D···A	∠ D–H···A
C2–H2...Cl2^{i}	0.93	2.69	3.396(3)	133.0
C7–H7...Cl2^{ii}	0.93	2.72	3.574(3)	152.9
C9–H9A...Br1^{iii}	0.93	2.92	3.696(3)	138.2
C10–H10B...Cl1^{iv}	0.97	2.80	3.724(3)	158.5
Symmetry codes: (i) -x, 1-y, 1-z; (ii) 1/2+x, 0.5-y, 1-z; (iii) x, 1/2-y, 1/2+z; (iv) 1-x, 1-y, 1-z.				

Table S3. Hydrogen bonding geometry (Å, °) for complex **3**.

D–H··· A	D–H	H···A	D···A	∠ D–H···A
N2–H1...N52^{i}	0.79(7)	2.47(6)	3.117(9)	139(5)
C3–H3...N5^{ii}	0.93	2.53	3.331(7)	145.0
Symmetry codes: (i) x, 1-y, 1/2+z; (ii) -1/2+x, 3/2-y, -1/2+z.				