

## List of Publications

<b>1*</b>	Heterometallic Copper(II)–Tin(II/IV) Salts, Cocrystals, and Salt Cocrystals: Selectivity and Structural Diversity Depending on Ligand Substitution and the Metal Oxidation State Hazra, S.; <b>Chakraborty, P.</b> ; Mohanta, S. <i>Cryst. Growth Des</i> <b>2016</b> , <i>16</i> , 3777.
<b>2*</b>	Surprising Difference Between Two Closely Similar O(phenoxo) <sub>2</sub> O(ether) <sub>2</sub> Compartments as Hosts for an Aquated Proton and a Novel Type of Host–Guest System <b>Chakraborty, P.</b> ; Jana, A.; Mohanta, S. <i>Polyhedron</i> <b>2014</b> , <i>77</i> , 39.
<b>3*</b>	Syntheses, Structures, Catecholase Activity, Spectroscopy and Electrochemistry of a Series of Manganese(III) Complexes: Role of Auxiliary Anionic Ligand on Catecholase Activity <b>Chakraborty, P.</b> ; Majumder, S.; Jana, A.; Mohanta, S. <i>Inorg. Chim. Acta</i> <b>2014</b> , <i>410</i> , 65.
<b>4*</b>	Syntheses, Structures and Catecholase Activity of two Cobalt(III) Complexes Derived from <i>N,N'</i> -ethylenebis(3-ethoxysalicylaldimine): A Special Host–Guest System from a Special Ligand <b>Chakraborty, P.</b> ; Mohanta, S. <i>Inorg. Chim. Acta</i> <b>2015</b> , <i>435</i> , 38.
<b>5*</b>	Mononuclear and Heterometallic Dinuclear, Trinuclear and Dimer-of-Dinuclear Complexes Derived from Single- and Double-Compartment Schiff Base Ligands Having a Less Utilized Diamine <b>Chakraborty, P.</b> ; Mohanta, S. <i>Polyhedron</i> <b>2015</b> , <i>87</i> , 98.
<b>6*</b>	Syntheses, Crystal structures, Lone Pair Functionality and Electrospray Ionization Mass Spectral Properties of Trinuclear, Dimer of Trinuclear and Trinuclear-Based One-Dimensional Systems of Copper(II) and Lead(II) <b>Chakraborty, P.</b> ; Mohanta, S. <i>Inorg. Chim. Acta</i> <b>2017</b> , <i>455</i> , 70.
<b>7*</b>	Crystal Structure and Magnetic Properties of a Hexacopper(II)-Based Azide-Bridged One-Dimensional Coordination Polymer: A New Pattern of Azide-Bridged Network Sasmal, S.; <b>Chakraborty, P.</b> ; Bhattacharya, S.; Aliaga-Alcalde, N.; Mohanta, S. <i>Polyhedron</i> <b>2014</b> , <i>73</i> , 67.
<b>8</b>	Syntheses, Crystal Structures and Magnetic Properties of Three Bis(End-On Azide) Bridged Dicopper(II) Complexes Derived from Half-Condensed Ligands: Observation of the Smallest Cu–Azide–Cu Bridge Angle in Dinuclear Systems Mondal, S.; <b>Chakraborty, P.</b> ; Aliaga-Alcalde, N.; Mohanta, S. <i>Polyhedron</i> <b>2013</b> , <i>63</i> , 96.
<b>9</b>	Exploration of Heterometallic Systems Containing Silver(I) in Acyclic Schiff Base Ligands: Finite and Infinite Self-Assemblies as a Result of Silver(I)–Carbon Bond and Silver(I)...Silver(I) Interaction Biswas, A.; Mondal, S.; Mandal, L.; Jana, A.; <b>Chakraborty, P.</b> ; Mohanta, S. <i>Inorg. Chim. Acta</i> <b>2014</b> , <i>414</i> , 199.

\* Marked articles will be included in the thesis

## ***Supporting Information***

- 1. CCDC Numbers of 35 crystal structures included in this thesis.**
- 2. Reprints of seven published articles included in this thesis.**

# 1. CCDC Numbers of 35 Crystal Structures

Additional crystallographic informations are available from the Cambridge Crystallographic Data Center, 12 Union Road, Cambridge CB2 1EZ, U. K. (Internet: [www.ccdc.ac.uk/data\\_request/cif](http://www.ccdc.ac.uk/data_request/cif); Fax: (+44) 1223-336-033; E-mail: [deposit@ccdc.cam.ac.uk](mailto:deposit@ccdc.cam.ac.uk))

The CCDC number of the structures already published is mentioned in the following table.

Compound	CCDC Number	Discussed in
$[\text{CuL}^1]_2 \cdot [\text{SnMe}_2\text{Cl}_4]^{2-} \cdot (\text{H}_2\text{ED})^{2+}$ (1)	1420639	Chapter 2
$[\text{CuL}^1]_2 \cdot [\text{SnEt}_2\text{Cl}_4]^{2-} \cdot (\text{H}_2\text{ED})^{2+} \cdot 0.5\text{H}_2\text{O}$ (2)	1428293	Chapter 2
$[\text{CuL}^1]_2 \cdot [\text{Sn}(n\text{-Bu})_2\text{Cl}_4]^{2-} \cdot (\text{H}_2\text{ED})^{2+}$ (3)	1420640	Chapter 2
$[\text{CuL}^1]_2 \cdot [\text{SnPh}_2\text{Cl}_4]^{2-} \cdot (\text{H}_2\text{ED})^{2+}$ (4)	1428294	Chapter 2
$[\text{CuL}^1]_2 \cdot [\text{SnPh}_2\text{Cl}_4]^{2-} \cdot (\text{H}_2\text{ED})^{2+} \cdot 2\text{MeOH}$ (5)	1428295	Chapter 2
$[\text{CuL}^2]_2 \cdot [\text{SnMe}_2\text{Cl}_2(\text{H}_2\text{O})_2] \cdot 0.2\text{H}_2\text{O}$ (6)	1420642	Chapter 2
$[\text{CuL}^2] \cdot [\text{Sn}(n\text{-Bu})_2\text{Cl}_2(\text{H}_2\text{O})]$ (7)	1420643	Chapter 2
$[\text{CuL}^2]_2 \cdot [\text{SnPh}_2\text{Cl}_4]^{2-} \cdot (\text{H}_2\text{ED})^{2+}$ (8)	1420641	Chapter 2
$[\text{CuL}^1\text{SnCl}]^+ \cdot [\text{SnCl}_3]^-$ (9)	1420644	Chapter 2
$[\text{CuL}^2\text{SnCl}]^+ \cdot [\text{SnCl}_3]^-$ (10)	1420645	Chapter 2
$[\{\text{Cu}^{\text{II}}\text{L}^1\}(\text{Me}_2\text{NH}_2)](\text{ClO}_4)$ (11)	954915	Chapter 3
$[\{\text{Cu}^{\text{II}}\text{L}^3\}(\text{Me}_2\text{NH}_2)](\text{ClO}_4)$ (12)	954916	Chapter 3
$[\{\text{Cu}^{\text{II}}\text{L}^4\}(\text{Me}_2\text{NH}_2)](\text{ClO}_4)$ (13)	954917	Chapter 3
$[\{\text{Cu}^{\text{II}}\text{L}^1\}_2(\text{enH}_2)](\text{ClO}_4)_2$ (14)	954918	Chapter 3
$[\{\text{Cu}^{\text{II}}\text{L}^3\}_2(\text{opdaH}_2)](\text{ClO}_4)_2 \cdot 2\text{H}_2\text{O}$ (15)	954919	Chapter 3
$[\{\text{Cu}^{\text{II}}\text{L}^4\}(\text{MeOH}_2)](\text{ClO}_4)$ (16)	969707	Chapter 3
$[\text{Mn}^{\text{III}}\text{L}^2(\text{OAc})(\text{H}_2\text{O})] \cdot \text{DMF}$ (17)	926141	Chapter 4
$[\text{Mn}^{\text{III}}\text{L}^2(\text{Cl})(\text{H}_2\text{O})] \cdot 2\text{H}_2\text{O}$ (18)	926142	Chapter 4
$[\text{Mn}^{\text{III}}\text{L}^2(\text{N}_3)(\text{H}_2\text{O})]$ (19)	926143	Chapter 4
$[\text{Mn}^{\text{III}}\text{L}^2(\text{NCS})(\text{H}_2\text{O})]$ (20)	926144	Chapter 4
$[\text{Mn}^{\text{III}}\text{L}^2(\text{NCSe})(\text{H}_2\text{O})] \cdot \text{MeCN}$ (21)	926145	Chapter 4
$[\text{Co}^{\text{III}}\text{L}^2(\text{N}_3)_2 \supset (\text{H}_3\text{O}^+)] \cdot 2\text{MeOH}$ (22)	1038949	Chapter 5
$[\text{Co}^{\text{III}}\text{L}^2(\text{NCS})(\text{H}_2\text{O})] \cdot \text{DMF} \cdot \text{H}_2\text{O}$ (23)	1038950	Chapter 5
$[\text{Cu}^{\text{II}}\text{L}^5] \cdot \text{MeOH}$ (24)	1014341	Chapter 6

$[\text{Cu}^{\text{II}}(\text{acetone})\text{L}^5(\text{U}^{\text{VI}}\text{O}_2)(\text{NO}_3)_2] \cdot 1.5\text{CH}_3\text{COCH}_3$ ( <b>25</b> )	1014342	Chapter 6
$[\text{Cu}^{\text{II}}(\text{H}_2\text{O})\text{L}^7(\text{U}^{\text{VI}}\text{O}_2)(\text{NO}_3)_2] \cdot \text{MeCN}$ ( <b>26</b> )	1014343	Chapter 6
$[\text{Ni}^{\text{II}}\text{L}^5(\text{U}^{\text{VI}}\text{O}_2)(\text{NO}_3)_2] \cdot \text{CH}_3\text{COCH}_3$ ( <b>27</b> )	1014344	Chapter 6
$[\{\text{Cu}^{\text{II}}\text{L}^5\text{Ag}^{\text{I}}(\text{NO}_3)\}_2]$ ( <b>28</b> )	1014345	Chapter 6
$[\{\text{Cu}^{\text{II}}\text{L}^6\text{Ag}^{\text{I}}(\text{NO}_3)\}_2]$ ( <b>29</b> )	1014346	Chapter 6
$[(\text{Cu}^{\text{II}}\text{L}^5)_2\text{Cd}^{\text{II}}(\text{ClO}_4)_2]$ ( <b>30</b> )	1014347	Chapter 6
$[(\text{Cu}^{\text{II}}\text{L}^8)_2\text{Pb}^{\text{II}}(\text{ClO}_4)_2]$ ( <b>31</b> )	1490211	Chapter 7
$[(\text{Cu}^{\text{II}}\text{L}^6)_2\text{Pb}^{\text{II}}(\text{NO}_3)_2]$ ( <b>32</b> )	1490212	Chapter 7
$[\{(\text{Cu}^{\text{II}}\text{L}^6)_2\text{Pb}^{\text{II}}\}_2(\mu\text{-adipate})](\text{ClO}_4)_2 \cdot 2\text{H}_2\text{O}$ ( <b>33</b> )	1490213	Chapter 7
$[(\text{Cu}^{\text{II}}\text{L}^6)_2\text{Pb}^{\text{II}}(\mu_{1,5}\text{-dicyanamide})_2]_n$ ( <b>34</b> )	1490214	Chapter 7
$[\text{Cu}^{\text{II}}_6(\text{N,N-diEten})_2(\mu_{1,1}\text{-N}_3)_8(\mu_{1,1,1}\text{-N}_3)_2(\mu_{1,3}\text{-N}_3)_2]_n$ ( <b>35</b> )	944266	Chapter 8