

## CURRICULUM VITAE

**Name:** Prof.(Dr.) *Baljit Singh*  
**Designation:** *Professor*  
*Former Head of Chemistry Department (01-07-2020 to 30 -06-2023)*  
*Member of Syndicate*

**Present Address:** Department of Chemistry,  
Punjabi University Patiala  
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**Qualification:**  
M.Sc., Ph.D. (Chemistry), Punjabi University, Patiala.

**Specialization:**  
Physical Chemistry

**Area of research:**  
Synthetic Electrochemistry  
Chemical Kinetics  
Polymer Chemistry

**Courses Taught:**  
Chemical Kinetics  
Surface Chemistry  
Polymer Chemistry  
Atmospheric Chemistry  
NMR & ESR Spectroscopy  
Fast Reactions

### **Research Projects:**

- (1) Electrochemical reactions at zinc anode & cathode to prepare Organozinc compounds (UGC minor Project in 2001 - 2003 & amount sanctioned was Rs. 18800/-)
- (2) UGC Major Research project, Topic: "Direct Electrochemical synthesis of new compounds at sacrificial cadmium and aluminium anode"(year-2011 and amount sanctioned Rs. 8,73,800/-)

### **Conferences/ Seminars/ Workshops**

1. Sixth Punjab Science Congress, held at SLIET Lonogowal, on 7-9 Feb. **2003**
2. Chemistry at Interfaces trends- perspectives, held at SLIET Longowal , on 19-20 Dec.**2003**.
3. Workshop on Organo metallic Chemistry, BARC Mumbai. April 18-20, **2005**
4. UGC-SAP National seminar on recent trends in synthetic and polymer chemistry held at HP university Shimla on 5-6 Dec.**2005**
5. Matcon 2007 International conference on materials for the Millennium, held at Cochin on 1-3 Mar., **2007**
6. UGC-SAP National seminar on recent trends in synthetic and Polymer Chemistry, held at H.P. University, Shimla on 23-24 March **2007**.
7. National Symposium on Green Chemistry in sciences and engineering, held at SLIET Longowal, on 29-30 March,**2007**.
8. 11th Punjab Science Congress, held at Thapar University Patiala on 7-9 Feb., **2008**.
9. National seminar on recent trends in Chemistry, held at dept. of chemistry, Punjabi University, Patiala, on 21-22 Jan, **2009** .
10. National Symposium on Emerging trends in Chemistry, held at dept. of Chemistry, Punjabi University Patiala, on 15 -16 Feb.**2010**.
11. National Symposium on recent advances in Chemistry and their impact on environment held at dept. of chemistry, Punjabi University Patiala, on 15-16 Feb. **2011**.
12. 4<sup>th</sup> National seminar on Chemistry: An interdisciplinary science, held at dept. of chemistry, Punjabi University, Patiala, on 15-16 Feb. **2012**,
13. 5<sup>th</sup> National Seminar on " New Frontiers in Chemistry" held at Department of Chemistry, Punjabi University, Patiala on February 15-16, **2013**.
14. 6<sup>th</sup> National Seminar on "New Paradigm in Chemical Sciences" held at Department of Chemistry, Punjabi University, Patiala on February 13, **2014**.
15. 7<sup>th</sup> National Seminar on " Synergistic Aspects of Chemical and other Sciences-2015" at held at Department of Chemistry, Punjabi University, Patiala on February 19-20, **2015**.
16. 8<sup>th</sup> National Seminar on "New Paradigm in Chemical Sciences: Synthetic and Analytical Perspectives-2016" held at Department of Chemistry, Punjabi University, Patiala on February 04-05, **2016**.
17. 9<sup>th</sup> National Seminar on "New Paradigm in Chemical Sciences: Synthetic and Analytical Perspectives-2017" held at Department of Chemistry, Punjabi University, Patiala on February 09-10, **2017**.
18. 10<sup>th</sup> National Conference on Chemical and environmental sciences: Innovations and advances held at Department of Chemistry, Punjabi University, Patiala on February 15-

### List of Publications

1. J.S. Banait, S.K. Deol and **Baljit Singh**, Electrochemical reactions at sacrificial electrodes: part –V, Electrochemical synthesis of mercury (II) alkoxides and their coordination compounds: Synth. React. Inorg. Met.-org. Chem.. 20(10), **1990**, 1331.
2. J.S. Banait and **Baljit Singh**, Electrochemical reactions at sacrificial electrodes: part –VI, Synthesis of Cadmium alkoxides and their coordination compounds: Indian Journal of Chemistry, 30, **1991**, 895.
3. J.S. Banait, Rani Devi and **Baljit Singh**, Electrochemical reactions at sacrificial electrodes: part –VII, Synthesis of some unique mercury (II) alkoxides and glycolates and their coordination compounds: Bull. Chem. Soc. JAPAN, 64, **1991**, 3669.
4. J.S. Banait, B. Lal and **Baljit Singh**, Electrochemical reactions at sacrificial electrodes: part –IX, Synthesis of Aluminium Chelates: J. Electrochem. Soc. (India), 41-1, **1992**, 23
5. J.S. Banait, B. Lal and **Baljit Singh**, Electrochemical reactions at sacrificial electrodes: part –VIII, Synthesis of Aluminium alkoxides and their coordination compounds: J. Indian. Chem. Soc., 71, **1994**, 543.
6. J.S. Banait and **Baljit Singh**, Electrochemical reactions at sacrificial electrodes: part –X, Synthesis of Cadmium Chelates compounds: J. Electrochem. Soc. (India), 45-2, **1996**, 103.
7. J.S. Banait and **Baljit Singh**, Electrochemical reactions at sacrificial electrodes: part –XI, Synthesis of Zinc (II) Chelates: J. Electrochem. Soc. (India), 46-4, **1997**, 215.
8. J.S. Banait, Neeru Arora and **Baljit Singh**, Electrochemical reactions at sacrificial electrodes: part –XII, Synthesis of some unique mercury (II) Glycolates: J. Electrochem. Soc. (India), 49-1, **2000**, 10.
9. J.S. Banait and **Baljit Singh**, Electrochemical reactions at sacrificial electrodes: part –XIV, Synthesis of Organocadmium Compounds: J. Electrochem. Soc., (India), 50 -2, **2001**, 76.
10. J.S. Banait, Neeru Arora and **Baljit Singh** and Harpreet Kaur, Electrochemical reactions at sacrificial electrodes: part –XIII, Synthesis of some unique mercury (II) glycolates: J. Electrochem. Soc. (India), 52-3, **2003**, 118.
11. J.S. Banait, Baljit Singh and Harpreet Kaur, Electrochemical reactions at sacrificial electrodes: part –XVI, Synthesis of Zinethiolates/dithiolates and their coordination compounds: J. Indian. Chem. Soc., 82, 2005, 555.
12. J.S. Banait, **Baljit Singh** and Sarbjit Rala, Electrochemical reactions at sacrificial electrodes: part –XX, Synthesis of coordination compounds of antimony (III) alkoxides: J. Indian. Chem. Soc., 84, **2007**, 25.
13. J.S. Banait, **Baljit Singh** and Harpreet Kaur, Electrochemical reactions at sacrificial electrodes: part –XVII, Synthesis of Zinc (II) alkoxides; Indian J. of Chemistry, 46A, **2007**, 266.
14. J.S. Banait, **Baljit Singh** and Sarbjit Rala, Electrochemical reactions at sacrificial electrodes: part –XIX, Synthesis of Antimony (III) alkoxides: J. Indian. Chem. Soc., 84, **2007**, 135.

15. J.S. Banait, **Baljit Singh** and Harpreet Kaur, Electrochemical synthesis of Zinc (II) Phenoxides and their coordination compounds, PortugaliaeElectrochimicaActa., 25, **2007**, 435.
16. **Baljit Singh** and Harpreet Kaur, Electrochemical Synthesis of Bismuth(III) alkoxides; J. Indian. Chem. Soc., 85, **2008**, 849.
17. Amitkumar, **Baljit Singh** and H N Dutta, Applications of acoustic sounder in reducing airpollution over vindhyan region (MP), India; J.Ecophysiol. occup. Hlth, 8, **2008**, 219.
18. Amitkumar, **Baljit Singh** and H N Dutta, Dispersion of air pollutants in low wind conditions at Hisar city; J.Ecophysiol. occup. Hlth, 8, **2008**, 241.
19. J.S. Banait, **Baljit Singh** and Sarbjit Rala, Electrochemical reactions at sacrificial electrodes: part –XXI: Synthesis of unique Antimony (III) alkoxides: J. Indian. Chem. Soc., 86, **2009**, 416.
20. J.S. Banait, **Baljit Singh** and Harpreet Kaur, Electrochemical reactions at sacrificial electrodes: part –XVIII, Synthesis of coordination compounds of Zinc (II) alkoxides; J. Indian Chemical Society, 87,**2010**, 261.
21. **Baljit Singh** and Kanchan Bala, Electrochemical reactions at sacrificial electrodes: Direct Electrochemical Synthesis of Cadmium(II) alkoxides and their coordination Compounds, J. Indian Chemical Society, 88,**2011**,271.
22. J.S. Banait, **Baljit Singh** and Harpreet Kaur, Electrochemical Synthesis of Zinc (II) glycolates and their coordination compounds J. Indian Chemical Society.,**88**,**2011**, 641.
23. **Baljit Singh** and Harpreet Kaur, Direct Electrochemical Synthesis of Bismuth(III) Phenoxides and their coordination compounds; E- Journal of Chemistry 9(1) **2012**,381.
24. **Baljit Singh**, Kanchan Bala, Gurpreet Kaur and Simrat Singh, Electrochemical reactions at sacrificial electrodes: Direct Electrochemical Synthesis of Cadmium(II) thiolates and their Coordination compounds, Chem Sci Trans.,2(1), **2013**, 222.
25. Baljit Singh, Kanchan Bala, Sukhveer Singh and Kishanpal Singh, Direct Electrochemical Synthesis of Aluminium (III) thiolates and their Coordination compounds, Chem Sci Trans.,2(4), **2013**, 1312.
26. Baljit Singh, Kanchan Bala, Kishanpal Singh and Sukhveer Singh, Electrochemical reactions at sacrificial electrodes: Electrochemical Synthesis of Aluminium (III) alkoxides and their Coordination compounds, Journal of Advances in Chemistry,5(1), **2013**, 592.
27. Manpreet Kaur, Baldev Singh and **Baljit Singh**,1,3-Dipolar cycloaddition reactions: Synthesis of 5-benzyl -1-(2',4'-dibromophenyl)-3-(4''- substituted phenyl)-3a,4,6,6a-tetrahydro-1H,5H-pyrrolo [3,4-c ] pyrazole-4,6-dione derivatives, J. Chem. Sci.,125(6), **2013**,1529.
28. **Baljit Singh**, Shavina and Kanchan Bala, Direct Electrochemical Synthesis of Bismuth (III) carboxylates and their Coordination Complexes, Chemical Science Review and Letters, 3(11), **2014**, 367.
29. **Baljit Singh** and Shavina, Direct Electrochemical Synthesis of Nickel(II) Thiolates and their Coordination complexes, Journal of Advances in chemistry.,11(9), **2014**, 3973.

30. Manpreet Kaur, Anjandeeep Kaur, Baldev Singh and **Baljit Singh**, Synthesis and Evaluation of Novel 5-cyclohexyl-2(4''-substitutedphenyl)-3-(2''-substitutedphenyl)4H-2,3,3a,5,6,6a-hexahydropyrrolo [3,4-d] isoxazole-4,6-dione derivatives for their in-vitro Antioxidant and Antibacterial Activities, *J. Hetrocyclic Chem.*, 54, 80-88, **2015**.
31. Kanchan Bala and Baljit Singh, *World Journal of Pharmacy and Pharmaceutical Sciences*, 5(9), 2016.
32. Harpreet Kaur and Baljit Singh, Direct electrochemical synthesis of Bismuth(III) thiolates, Dithiolates and their coordination compounds, *International organization of Scientific Research Journal of applied chemistry*, 10(6), 32-35, **2017**.
33. Kanchan Bala and Baljit Singh, Electrochemical Synthesis of Cadmium (II) carboxylates compounds at sacrificial cadmium anode, *Asian Journal of Chemistry*, 29(2), 336-340, **2017**.
34. Harpreet Kaur and Baljit Singh, Direct electrochemical synthesis of organobismuth compounds and their coordination compounds, *Int. Journal of Engineering Research and Application*, Vol 7, Issue 10, **2017**, 26-30.
35. Shavina and Baljit Singh, Synthesis and Characterization of unique Nickel (II) carboxylates and their coordination complexes, *Asian Journal of Chemistry*, **2018**, 30,416-420.
36. Kanchan Bala and Baljit Singh, Direct electrochemical synthesis of unique organoaluminium halides and their coordination complexes at sacrificial aluminium anode, **2018**, 30(5), 1070-1074.
37. Shavina, Baljit Singh and Satinderpal Kaur, Electrochemical reactions of aldehydes/ketones at sacrificial nickel anode: synthesis and characterization of Nickel (II) Glycolates and their coordination complexes, *Asian Journal of Chemistry*, **2018**, 30, 1247-1251.
38. Synthesis of  $\alpha$ -Hydroxycarboxylic Acids from Various Aldehydes and Ketones by Direct Electrocarboxylation: A Facile, Efficient and Atom Economy Protocol ,Kishanpal Singh<sup>a</sup>, Harvinder Singh Sohal<sup>b</sup>, and Baljit Singh<sup>a,\*</sup>, *Asian Journal of Chemistry vol.33,No.4(2021)* 839-845
39. Synthesis and Antimicrobial evaluation of some novel 2-(5-(ethoxycarbonyl)-3-methyl-4-substituted-1,4-dihydropyrano[2,3-c]pyrazol-6-yl)acetic acid derivatives. Kishanpal Singh<sup>a</sup>, Harvinder Singh Sohal, Baljit Singh<sup>\*</sup>, *Russian Journal of Organic Chemistry,vol.59,No.1(2023)108-116*
40. Electrochemical Synthesis and Antimicrobial Evaluation of some N-Substituted  $\alpha$ -Amino Acids,Kishanpal Singh<sup>a</sup>, Neetu Singh<sup>b</sup>, Harvinder Singh Sohal<sup>b,\*</sup>, Baljit Singh<sup>a,\*</sup>, Fohad Mabood Husain<sup>c</sup>, Mohammed Arshad<sup>d</sup>, Mohd Adil<sup>e</sup>, *Topics in Catalysis 2023*, (communicated).

**Research Guidance:****Ph.D Students:**

S. No.	Name	Year	Topic
1	HarpreetKaur	2006	Electrochemical synthesis of Zinc Compounds
2	SarabjitRala	2008	Direct electrochemical synthesis of antimony compounds.
3	AmitTyagi	2012	Application of acoustic sounder in Environmental Impact Assessment program over India.
4	HarpreetKaur	2012	Direct electrochemical synthesis of Bismuth compounds.
5	Kanchan Bala	2014	Direct electrochemical synthesis of new compounds at sacrificial cadmium and aluminium anode.
6	Manpreet kaur	2015	
7	Shavina	2018	Electrochemical synthesis of compounds at sacrificial nickel anode.
8	Kishanpal Singh	2023	Synthetic Electrochemistry: A Simple Technique to synthesize biologically significant compounds.

**M. Phil Students:**

S. No	Name	Year	Topic
1	KanchanBala	2010	Direct electrochemical synthesis of Cadmium compounds
2	GurpreetKaur	2011	Electrochemical synthesis Of some thiols at sacrificial cadmium anode
3	SimratSingh	2011	Electrochemical synthesis of coordination compounds of some thiols at sacrificial cadmium anode

<b>4</b>	Kishanpal Singh	2012	Electrochemical reactions of n-hexanol to n-decanol at sacrificial aluminium anode to synthesise aluminium (III) alkoxides.
<b>5</b>	Sukhveer Singh	2012	Direct electrochemical synthesis of Aluminium(III)thiolates and their coordination compounds.
<b>6</b>	Shavina	2013	Reactions of some carboxylic acids at sacrificial bismuth anode.
<b>7</b>	Ravneet Kaur	2016	
<b>8</b>	Satinderpal Kaur	2017	Electrochemical synthesis of some unique nickel(II) glycolates.