

CURRICULUM VITAE

Dr. V. Thangaraj

Assistant Professor

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EDUCATION

Doctor of Philosophy (Ph.D.) in Chemistry

Thesis Title: '*Electrodeposition and Characterization of some Zn-Fe group metal alloys*'

National Institute of Technology Karnataka (NITK), Surathkal, Karnataka. (March. 2009)

Advisor: Dr. A. Chitharanjan Hegde

Master of Science (M.Sc.) in Chemistry, Gandhigram Rural University, Gandhigram

(2001-2003). I class, 7.42/10

Bachelor of Science (B.Sc.) in Chemistry, Madurai Kamaraj University, Madurai

(1998-2001). I class, 68.5%

TEACHING EXPERIENCES

- As a Lecturer in Chemistry, Manipal Institute of Technology, Manipal University from Feb 2008 to August 2009.
- As an Assistant Professor in Chemistry, SRM University, Chennai from August 2009 to September 2009.
- As an Assistant Professor in Anna University Tiruchirappalli from Oct 2009 to till date.
Subjects handling: Engineering Chemistry, Environmental Science, for B.E./B.Tech.

RESEARCH EXPERIENCES

- Project fellow, **Electroplating and Metal Finishing Technology (EMFT)**, Central Electro Chemical Research Institute (**CECRI**), Karaikudi from May'2003 to July'04.

AREA OF RESEARCH

- Nanostructured electrochemical deposition of metals and alloys, Solar absorber coatings.
- Modified electrodes, Nanoparticles, Biosensors, Electrochemical sensors, Fuel cells and batteries.
- Conducting polymer, Thin films, PVD, CVD, Crystal growth, Giant magneto resistance (GMR), CMM, Anodizing, Corrosion and Corrosion inhibitors.

AWARDS AND HONOURS

- Best Presentation Award, International Conference on Functional Materials for Advanced Technology (ICFMAT -09), Velammal Engineering College, Chennai
- Summer Research Fellowship, Indian Academy of Sciences, 2009.

MEMBERSHIP

- Member, Resonance, IAS, Springer Publications
- Member, Transaction of Institute of Metal Finishing, Birmingham, UK

PUBLICATIONS

PAPERS PUBLISHED IN JOURNALS

1. **Thangaraj, V**; Elias, V and Chitharanjan Hegde, A. Corrosion behavior of compositionally modulated multilayered Zn/Co electroplates developed by single bath technique, *J. of App. Electrochem.*, **2009**, 39(3), 339.
2. **Thangaraj, V**. Characterization and corrosion behavior of Zn-Fe group metal alloys deposited by direct and pulsed current in acid chloride bath, *Trans. IMF*, **2009**, 87(4), 208.
3. **Thangaraj, V**; Ravishankar, K; and Hegde, A. C. Surface modification by compositionally modulated Zn/Fe alloy coatings, *Chin. J. of Chem.*, **2008**, 26, 2285.
4. **Thangaraj, V**; and Chitharanjan Hegde, A. Electrodeposition and Characterization of Zn-Co alloy *Russ. J. of Electrochem.*, **2009**, 45(7), 756.
5. **Thangaraj, V**; Udayashankar, N. K; and Hegde, A. C. Development of Zn-Co alloy coatings by pulsed current from chloride bath, *Ind. J. of Chem. Tech.*, **2008**, 15(11), 581.
6. Venkatakrishna, K; **Thangaraj, V**; Chitharanjan Hegde, A. Effect of bath composition and operating parameters on deposit character and corrosion behavior of Zn-Ni alloy, *Ind. J. of Chem. Tech.*, **2008**, 15(5), 252.
7. **Thangaraj, V**; and Hegde, A. C. Electrodeposition and compositional behavior of Zn-Ni alloy, *Ind. J. of Chem. Tech.*, **2007**, 14(5), 246.
8. **Thangaraj, V**; and Hegde, A. C. Anomalous Codeposition and Characterization of Zn-Fe Alloys, *Bull. of Electrochem.*, **2006**, 22(8-9), 393.
9. **Thangaraj, V**; and Hegde, A. C. Electrodeposition and characterization of Zn-Ni alloy, *Bull. of Electrochem.*, **2006**, 22(2), 49.
10. C. Surendra Dilip, **V. Thangaraj**, V.Siva Kumar and J. Joseph Prince, Synthesis and characterization of Co(III), Ni(II) and Cu(II) complexes of 3,8-dimethyl-5,6-benzo-4,7-diazadeca-3,7-diene-2,9-dione Dioxime. **Elixir Chemical Physics**, **2011**, 34, 2491.
11. C. Surendra Dilip, **V. Thangaraj**, A. Paul Raj, Synthesis, spectroscopic characterization, biological and DNA cleavage properties of complexes of Nicotinamide. **Arabian Journal of Chemistry** (online) (doi:10.1016/j.arabjc.2011.07.016).
12. Perumalraj K, Sivakarthik P and **Thangaraj V**, Comparative study of inhibition efficiency of some green inhibitors on mild steel corrosion at different temperatures. **Int J of Interdisci Res and Revs.** **2013**, 1(5) 1.
13. K Manikandan, P Mani, P Fermi Hilbert Inbaraj, T Dominic Joseph, **V Thangaraj** and J Joseph Prince, Influence of molar concentration on structural, morphological and optical properties of CdS thin films obtained by SILAR method. **Indian Journal of Pure and Applied Physics**, **2014**, 52, 354.

PAPERS PRESENTED IN SEMINARS, CONFERENCES AND SYMPOSIA

1. **Thangaraj, V;** and Hegde, A. C. Electrolytic synthesis of nanostructured multilayer coatings, NanoTech Insight'07, March 2007 held at Egypt.
2. **Thangaraj, V;** and Chitharanjan Hegde, A. Electrolytic synthesis and nanostructured multilayered coatings of Zn-Ni-Fe alloy, International Conference on Functional Materials for Advanced Technology -2009 (ICFMAT-09), January 2009 held at Velammal Engineering College, Chennai.
3. **Thangaraj, V;** and Chitharanjan Hegde, A. Study on the behavior of electrodeposited Zn-Ni alloy, International symposium on Advances in Electrochemical Science and Technology (ISAEST-8), November 2006 held at Goa, India.
4. **Thangaraj, V;** and Chitharanjan Hegde, A. Zn-Co alloy deposition by continuous and pulsed current, International Symposium of Research Scholars on Metallurgy, Material Science and engineering (ISRS-06), December 2006 held at IIT, Madras, Chennai, India.
5. **Thangaraj, V;** and Chitharanjan Hegde, A. Electrodeposition of cost effective black nickel solar absorber coatings, International Conference on Electrochemical Power Systems (ICEPS – 2), Dec. 2004 held at Hyderabad, India.
6. **Thangaraj, V;** and Chitharanjan Hegde, A. Electrodeposition and characterization of Zn-Co alloys by direct and pulsed current, National seminar on Current developments in Chemistry (NSDC-07), January 2007 held at Bharathiyar University, Coimbatore, India.
7. **Thangaraj, V;** and Chitharanjan Hegde, A. “Nanostructured multilayer coating – A new paradigm in electroplating” presented in Fourteenth National Congress on corrosion control held on Nov. 30 – Dec. 2007 at Holycross college, Trichy, Tamilnadu, India.
8. **Thangaraj, V;** and Chitharanjan Hegde, A. Development of compositionally modulated multilayered Zn/Ni electroplates for improved corrosion resistance, Fourteenth National Convention of Electrochemists (NCE-14), December 2007 held at IGCAR, Kalpakkam, India.
9. **Thangaraj, V;** and Chitharanjan Hegde, A. Electrodeposition of Zinc-iron compositionally modulated multilayered coatings and their corrosion behavior, Advances in Surface and Interface Analysis (ASIA-2007), December 2007 held at Periyar University, Salem.
10. **Thangaraj, V;** and Chitharanjan Hegde, A. Comparison of DC and pulse plated Zn-Fe alloy deposits, Advances in Surface and Interface Analysis (ASIA-2007), December 2007 held at Periyar University, Salem.

11. **Thangaraj, V;** and Chitharanjan Hegde, A. Electrochemical studies of pulse plated Zn-Ni alloy from sulphate bath, Advances in Surface and Interface Analysis (ASIA-2007), December 2007 held at Periyar University, Salem.
12. **Thangaraj, V;** and Chitharanjan Hegde, A. Corrosion behavior of pulse plated Zn-Co alloy from sulphate bath, Advances in Surface and Interface Analysis (ASIA-2007), December 2007 held at Periyar University, Salem.
13. **Thangaraj, V;** and Chitharanjan Hegde, A. Corrosion behavior of compositionally modulated multilayered Zn/Co electroplates developed by single bath technique, Bangalore NanoTech, December 2007 held at Bangalore, India.
14. **Thangaraj, V;** and Chitharanjan Hegde, A. Electrodeposition of bright Zn-Co alloy from Sulphate bath, Thirteenth National Convention of Electrochemists (NCE-13), May 2006 held at Central Electrochemical Research Institute (CECRI), Karaikudi, India.
15. **Thangaraj, V;** and Chitharanjan Hegde, A. Zn-Co anomalous codeposition and its corrosion performance, National Conference on Currents Trends in Chemical Research (CTCR – 2006), May 2006 held at Mangalore University, Mangalagangothri, Mangalore, India.
16. **Thangaraj, V;** and Chitharanjan Hegde, A. Electrodeposition and corrosion behavior of Zn-Fe alloy, Thirteenth National Congress on corrosion control, October 2006 held at Mangalore, Karnataka, India.
17. **Thangaraj, V;** and Chitharanjan Hegde, A. Electrochemical deposition and characterization of Zn-Ni alloys deposited by direct and pulse current, Thirteenth National Congress on corrosion control, October 2006 held at Mangalore, Karnataka, India.
18. **Thangaraj, V;** and Chitharanjan Hegde, A. Electrodeposition and characterization of Zn-Co alloy, National conference of Emerging Trends and New vistas in Chemistry (EMTIC-2005), Nov. 2005 held at University of Calicut at Calicut, India.
19. **Thangaraj, V;** and Chitharanjan Hegde, A. Electrodeposition and characterization of Zn-Ni alloy, National Conference of Recent Advances in Electrochemical and Surface Sciences for Industry and Society, December 2004 held at Kuvempu University, Shimoga, India.
20. **Thangaraj, V;** and Nagarajan, N. S. Inhibitive effect of extracts of pongamia glabra and dalbergia sissoides on corrosion of aluminium in hydrochloric acid, Futuristic aspects of electrochemical science and technology, July 2003 held at CECRI, Karaikudi, India.
21. S. Aranvindha Raja and **V. Thangaraj**, 'Super Capacitance Studies of MnO₂ Nanoparticles by Various Wet Chemical Approaches' (Abstract no. AB-257), International Conference on Advances in New materials (ICAN 2014), Jan 2014 held at University of Madras, Chennai.

22. A.Ganesh pandi and **V. Thangaraj**, 'Synthesis and characterization of MgO nanostructures' (Abstract no. AB-260) International Conference on Advances in New materials (ICAN 2014), Jan 2014 held at University of Madras, Chennai.

CONFERENCES/ SEMINARS/ WORKSHOPS/SUMMER SCHOOLS ORGANIZED

1. **Coordinator**, Royal Society of Chemistry (RSC) sponsored One day National Seminar on Photocatalysis for Sustainability: Fundamentals Applications (PHOCATS-2013) on 9th Oct, 2013 at Anna University, BIT Campus, Tiruchirappalli.
2. **Coordinator**, National Seminar on Modern Trends in Chemistry (MTC-2013), on 17-18th Dec, 2013 at Anna University, BIT Campus, Tiruchirappalli.
3. **Convener**, National Seminar on "Career guidance, GATE exam preparation and Development of Soft skills (CGSS-2014) on 6th Feb, 2014 at Anna University, BIT Campus, Tiruchirappalli.
4. **Convener**, National seminar on " Research Paper, Dissertation and Project proposal preparation (RDP-2014) on 14th Feb, 2014 at Anna University, BIT Campus, Tiruchirappalli.
5. **Convener**, National seminar on "e-Resources for Scholarly Communication" on 28th Feb, 2014 at Anna University, BIT Campus, Tiruchirappalli

WORKSHOPS/SUMMER SCHOOLS/FDP ATTENDED

1. Carried out Summer Research in Indian Institute of Science (IISc), Bangalore under the scheme of "Summer Research Fellowship" by Indian academy of Sciences during May-July, 2009.
2. Participated in a workshop on "Sustainable Municipal Solid Waste Management (SMSWM'10)" in Anna University of Technology, Tiruchirappalli, on 4th Oct. 2010.
3. Participated in a National Seminar on "Societal Implications of Nanoscience & Technology" in Anna University of Technology, Tiruchiappalli, on 23rd Dec. 2010.
4. Participated in FDP on Current Developments in Life Sciences: An Interdisciplinary Approach (CDLS-2013)' during 19th August – 25th August, 2013 in Anna University, BIT Campus, Tiruchirappalli.

ORIENTATION COURSE/REFRESHER COURSE ATTENDED

1. Attended UGC Sponsored 110th Orientation Course Programme in UGC-Academic Staff College, Pondicherry University, Puducherry from 19.12.2012 to 15.01.2013.
2. Attended UGC Sponsored Refresher Course Programme in UGC-Academic Staff College, University of Kerala, Tiruvananthapuram from 22.10.2013 to 11.11.2013..

BOOKS PUBLISHED

1. **Thangaraj Vairamuthu**, A. Chitharanjan Hegde, Electrodeposition and characterization of some Zn-Fe group metal alloys, LAP Lambert Academic Publishing, ISBN 978-3-8383-7710-0.
2. V. Raj and **V. Thangaraj**, Surface technology of Aluminum and its alloys, LAP Lambert Academic Publishing, ISBN 978-3-8433-9181-8.

SPONSORED PROJECTS

Sl. No	Name of the staff	Title of the project	Funding Agency	Amount Sanctioned	Status (On-going/Completed)
1.	Dr. V. Thangaraj	Synthesis of Compositionally Modulated Multilayered Alloys by Electrochemical Deposition	DST-SERB	24.5 Lakhs	On-going

REVIEWER IN JOURNALS

1. Journal of Applied Electrochemistry
2. African Journal of Pure and Applied Chemistry
3. Recent Patents on Corrosion Sciences.
4. Arabian Journal of Chemistry

HONORARY ASSIGNMENTS

1. **Coordinator – Library** from October 2013 onwards in Anna University, BIT Campus, Trichy.
2. **Stock verification Officer** for Civil Engineering Dept. in the calendar year of 2010-2011 and 2011-2012 in Anna University, Trichy.
3. Member, **Anti ragging Committee** in Manipal Institute of Technology (MIT), Manipal (2008-2009) and Anna University, Trichy (2012-2013).
4. Member, **NBA Centre Pool Committee** in Anna University, BIT Campus, Trichy (2013-2014).
5. Member, **Exam Cell**, in Anna University, BIT Campus, Trichy (2012-2013).
6. **Student Counselor** in Manipal Institute of Technology (MIT) (2008-2009) and Anna University, Trichy (2010-11 and 2011-2012).
7. Dept Coordinator, **SC-ST Cell**, during 2011-2012 in Anna University, Trichy.
