

Name : Dr.P.Amaravathy
Designation : Assistant Professor
Department : Chemistry
Qualification : M.Sc., B.Ed., M.Phil., Ph.D., PDF
Experience : Teaching: 1.08 Years Research: 7 Years
Area of Specialization(s) : Bioimplant materials
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Academic Qualifications

Degree	Branch	Institution / University Name	Year of Graduation
PDF	Biomaterials	Indian Institute of Technology, Madras	2018
Ph. D.	Chemistry	College of Engineering, Guindy, Anna University, Chennai.	2015
M. Phil.	Chemistry	College of Engineering, Guindy, Anna University, Chennai.	2010
M.Sc.	Chemistry	Adhithanar College of Arts and Science, Trichendur	2009
B.Sc., B.Ed	Chemistry	Regional Institute of Education, Mysore	2007

Additional qualification

B.A in hindi

Projects

Completed

Project Title	Agency	Amount	Duration
PEO/chitosan/TiO ₂ coated magnesium alloys for biomedical applications	DST-SERB	19,20,000	2 years

Research Publications

International

1. Amaravathy. P and Sampath Kumar T. S (2019), Bioactivity enhancement by Sr doped Zn-Ca-P coatings on biomedical magnesium alloy, Journal of Magnesium and alloys 7 584-596.
 2. P. Amaravathy and T.S. Sampath Kumar (2017), 'Novel Strontium Doped Zinc Calcium Phosphate Conversion Coating on AZ31 Magnesium Alloy for Biomedical Applications' Journal of Biomimetics, Biomaterials and Biomedical Engineering, 34 57-67. ISSN-2296-9845.
- Amaravathy, P, Sowndarya, S, Sathiyarayanan, S & Rajendran, N (2014), Novel sol gel coating of

Nb₂O₅ on magnesium alloy for biomedical applications, Surface and Coatings Technology 244, 131-141.
Amaravathy, P, Rose, C, Sathiyarayanan, S & Rajendran, N (2012), 'Evaluation of *in vitro* bioactivity and MG 63 Osteoblast cell response for TiO₂ coated magnesium alloys, Journal of Sol-Gel Science and Technology 64, 694-703.
Amaravathy, P, Sowndarya, S, Sathiyarayanan, S & Rajendran, N(2013), Bioactive HA/TiO₂ coating on magnesium alloy for biomedical applications', Ceramics International 40, 6617-6630.

Presentations in Conference

1. **Amaravathy, P** & Rajendran, N, 'Synthesis and characterisation of TiO₂-ZrO₂ coating on magnesium alloys for biomedical applications', CORCON 2011, NACE East & Pacific Area Corrosion Conference & Expo. Mumbai, India, 28th September-1st October, 2011.
2. **Amaravathy, P** & Rajendran, N, 'Synthesis, characterization and *in vitro* behaviour of TiO₂ coated magnesium alloy for biomedical applications' in the National conference on Advanced Nanomaterials (ANM-2012), Periyar University, Salem, India 6-7th February, 2012.
3. **Amaravathy, P** & Rajendran, N, 'Development of hydroxyapatite/ TiO₂ composite coating on magnesium alloy AZ31 for biomedical applications' Recent Trends in Biomaterials on Tissue Engineering (RTBTE-12), Velammal Institute of Technology, Chennai, Tamilnadu, India, 27th - 28th July, 2012.
4. **Amaravathy, P** & Rajendran, N, 'Development of Hydroxyapatite/ Nb₂O₅ coating on magnesium alloy AZ31 for biomedical applications', 10th International Symposium on Advances in Electrochemical Science and Technology (ISAEST-10), Hotel Green Park, Chennai, Tamilnadu, India, 28th-30th January, 2013.
5. **Amaravathy, P** & Rajendran, N, 'Novel chitosan/ TiO₂ composite coating for biomedical applications', International Corrosion Prevention Symposium for Research Scholars (CORSYM-2013), GRT Grant, Chennai, Tamilnadu, India, 28th February -2nd March, 2013.
6. **Amaravathy, P** & Rajendran, N, 'Evaluation of *in vitro* bioactivity and corrosion resistance of Nb₂O₅/ Hydroxyapatite coated magnesium alloy for biomedical applications', International conference on surface Engineering for research and industrial applications (SERIA-2013), Rajalakshmi Engineering College, Chennai, India, 7th-9th, August, 2013.
7. **P.Amaravathy** and N.Rajendran, Ceramic coatings on magnesium alloys for biomedical applications, Indo-Australian conference on Biomaterials, Tissue Engineering, Drug Delivery System & Regenerative Medicine (BiTERM 2015), Feb 5 - 7, 2015 Anna University, Chennai.
8. **P.Amaravathy** and Sampath Kumar T.S, "Optimisation of strontium doped zinc calcium phosphate conversion coating and *in vitro* analysis on AZ31 magnesium alloy for biomedical application", National seminar on Advanced Biomaterials and Applications, Hindustan university, Chennai, India, 15th February, 2017.
9. **P.Amaravathy** and Sampath Kumar T.S, "Strontium doped zinc calcium phosphate conversion coating on AZ31 magnesium alloys", The 6th Asian biomaterials international congress, Sree Chitra Thirunal Institute for Medical Sciences, Thiruvananthapuram.

10. **P.Amaravathy** and Sampath Kumar T.S, “Evaluation of cytotoxicity and corrosion resistance of zinc calcium phosphate conversion coated AZ31 magnesium alloy for biomedical applications”, In house symposium, Department of Metallurgical and Materials Engineering, IIT, Madras, 29-30 July 2017.

11. **P.Amaravathy** and Sampath Kumar T.S, “Sr modified MAO coated AZ31 magnesium alloys for biomedical orthopaedic applications”, In house symposium, Department of Metallurgical and Materials Engineering, IIT, Madras, 11-12 May 2018.

12. **P.Amaravathy**, “Modified oxide layer coated magnesium alloys by MAO method for orthopaedic applications” D.G. Vaishnava College, Chennai, 6th February 2020.

Participation in Seminars

1. Attended national level seminar on Nano Technology and Drug Research conducted by P.G. Department of Chemistry, Adhithanar College of Arts and Science, Tiruchendur on 17th October 2008.

Participation in Orientation Programme / Short Term Courses

1. Attended the NIGIS and IITM HRDC education and training programme on Industrial cooling water systems conducted during 19-21 December 2013 at Anna University Chennai.

2. Attended workshop programme on Advances in Chemistry conducted by Department of Chemistry and Research Centre, Adhithanar College of Arts and Science, Tiruchendur on 19th and 20th December 2008.

3. Attended national level seminar on Nano Technology and Drug Research conducted by P.G. Department of Chemistry, Adhithanar College of Arts and Science, Tiruchendur on 17th October 2008.

4. Participated in the short-term training course on Corrosion and its control STCC-2014 organised by the Department of Chemistry, SRM University in association with NIGIS South zone during January 30-31, 2014.

MEMBERSHIP IN PROFESSIONAL BODIES

Name of the Professional Body	Nature of membership	Duration
Indian Society of Electro analytical Society	Life member	Life long

Awards / Honors

Awards / Honors	Agency / Institute	Year of Award
Meritorious scholarship	Regional Institute of Education (NCERT), Mysore.	2003
Anna Centenary Research Fellowship award	Anna University	2011
Best paper presentation (Oral)	Corrosion Prevention Symposium for Research Scholars (CORSYM-2013)	2013