

List of Publications: Total - 85

2019 (total -3)

1. **R. Subasri**, K.R.C. Soma Raju, D.S. Reddy, A. Jyothirmayi, Vijaykumar S. Ijeri, Om Prakash, Stephen P. Gaydos, Environmental friendly Zn-Al Layered Double Hydroxide (LDH) based Sol-Gel Corrosion Protection Coatings on AA 2024-T3, J. Coat Technol. Res. (Accepted)
2. **R. Subasri**, D. S. Reddy, K. R.C. Soma Raju, K. S. Rao, P. Kholov, N. Gaponenko, "Sol-Gel Derived Ba/SrTiO₃-MgF₂ Solar Control Coating Stack on Glass for Architectural and Automobile Applications", Special issue of Research on Chemical Intermediates (2019)- accepted.
3. N. V. Gaponenko, P. A. Kholov, K. S. Sukalin, T. F. Raichenok, S. A. Tikhomirov, **R. Subasri**, K. R. C. Soma Raju, and A. V. Mudryi, Optical Properties of Multilayer BaTiO₃/SiO₂ Film Structures formed by the Sol-Gel Method, Physics of the Solid State, 61, (2019) 397–401

2018 (total -5)

1. S. Pradheebha, A. B. Ignatius, K. Srinivasa Rao, **R. Subasri**, Facile Fabrication of Durable Superhydrophobic Coatings on SS 304 for biomedical applications, International Journal of Nanobiotechnology 4 (2018) 21-34.
2. Swapnil H. Adsul, T. Siva, S. Sathiyarayanan, Shirish H. Sonawane, **R. Subasri**, "Aluminum pillared montmorillonite clay-based self-healing coatings for corrosion protection of magnesium alloy AZ91D" Surf. Coat. Technol. 352 (2018) 445-461.
3. S. Pradheebha, R. Unnikannan, Ravi.N. Bathe, G. Padmanabham, **R. Subasri**, "Effect of Plasma Pretreatment on Durability of Sol-Gel Superhydrophobic Coatings on Laser Modified Stainless Steel Substrates", J. Ad. Sci. Technol 32 (2018) 2394-2404.
4. Swapnil H. Adsul, K. R. C. Soma Raju, B. V. Sarada, Shirish H. Sonawane, **R. Subasri**, "Evaluation of self- healing properties of inhibitor loaded nanoclay-based anticorrosive coatings on magnesium alloy AZ91D", J. of Magnesium alloys, 6 (2018) 299-308.
5. S. Manasa, T. Siva, S. Sathiyarayanan, K.V. Gobi, **R. Subasri**, Montmorillonite Nanoclay-based Self-Healing Coatings on AA 2024-T4 Journal of Coatings Technology and Research 15 (2018) 721-735.

Total -77

2017 (total -5)

1. S. Manasa, A. Jyothirmayi, T. Siva, S. Sathiyarayanan, K.V. Gobi, **R. Subasri**, Effect of inhibitor loading into nanocontainer additives of self-healing corrosion protection coatings on aluminum alloy A356.0, Journal of Alloys and Compounds 726 (2017) 969-977.
2. Nikhil K. Barua, T. Ragini , **R. Subasri**, Sol-Gel derived Single-Layer Zeolite-based Coatings on Glass for Broadband Antireflection Properties, J Non Cryst Solids 469 (2017) 51-55.
3. S. Manasa, A. Jyothirmayi, T. Siva, B. V. Sarada, M. Ramakrishna, S. Sathiyarayanan, K. V. Gobi, **R. Subasri**, "Nanoclay based self-healing corrosion protection coatings on aluminum, A356.0 and AZ91 substrates", Journal of Coatings Technology and Research 14 (2017) 1195-1208.

4. Swapnil H. Adsul, T. Siva, S. Sathiyarayanan, Shirish H. Sonawane and **R. Subasri**, "Self-healing ability of nanoclay-based hybrid sol-gel coatings on magnesium alloy AZ91D" *Surface and Coatings Technology* 309 (2017) 609-620.
5. S. Anusankari, Abishya David, **R Subasri**, A. Balaji Ganesh "Dual sensing of pH and DO using Opto-Sol Fluorescence based sensor-A spectral Analysis", *Proceedings of the 2016 International Conference on Advanced Communication Control and Computing Technologies (ICACCCT)*, pp 454-457, ISBN No.978-1-4673-9545-8.

2016 (total -2)

1. **R. Subasri**, K.R.C. Soma Raju, D.S. Reddy, N.Y. Hebalkar, G. Padmanabham, Sol-gel derived solar selective coatings on SS 321 substrates for solar thermal applications, *Thin Solid Films* 598 (2016) 46-53.
2. S. Manasa, **R. Subasri**, Effect of heat treatment on the optical properties of sol-gel derived, fully dielectric solar control coatings on glass, *J. Coatings Technology and Research* 13 (2016) 623-628.

2015 (total -3)

1. Alcina Johnson Sudagar, **R. Subasri**, Fabrication and Characterization of Silver/Nickel Sulphide Solar Absorber Coatings on Stainless Steel by Chemical Bath Deposition, *Mater. Chem. Phys.* 163 (2015) 478-484.
2. **R. Subasri**, H. Hima, Investigations on the use of nanoclay for generation of superhydrophobic coatings, *Surface & Coatings Technology*, 264 (2015) 121–126.

3. Rekha Dom, A. Sadananda Chary, **R. Subasri**, Neha Y. Hebalkar and Pramod H. Borse, Solar hydrogen generation from spinel ZnFe_2O_4 photocatalyst: effect of synthesis methods, Int. J. Energy Res. (2015) Published online in Wiley Online Library (wileyonlinelibrary.com). DOI: 10.1002/er.3340

2014 (total -3)

1. M. Prekajski, M. Stojmenovic', A. Radojkovic', G. Brankovic', H. Oraon, **R. Subasri**, B. Matovic, Sintering and electrical properties of $\text{Ce}_{1-x}\text{Bi}_x\text{O}_{2-\delta}$ solid solution, J Alloys and Compds, 617 (2014) 563-568.
2. S. Pavithra and **R. Subasri**, Sol-gel derived single layer zeolite- MgF_2 composite antireflective coatings with improved mechanical properties on polycarbonate, Journal of Coating Science and Technology 1 (2014) 8-16.
3. K. Mamatha and **R. Subasri**, Investigations on Coatings Generated from Silica-Zirconia Hybrid Sols Synthesized through Hydrolytic/ Non-Hydrolytic Wet Chemical Route on PMMA Substrates, Ceramics International 40 (2014) 10615-10619

2013 (total -7)

1. N. Kumar, A. Jyothirmayi, K. R. C. Soma Raju, V. Uma and **R. Subasri** (2013): One Step Anodization/Sol-Gel deposition of Ce^{3+} -doped silica-zirconia Self-Healing Coating on Aluminum, ISRN Corrosion, article id 424805.
2. **R. Subasri**, G. Reethika and K.R.C. Soma Raju (2013): Multifunctional Sol-Gel Coatings for Protection of Wood, Wood Material Science and Engineering (in press), 8(4), (2013) 226-233.

3. K. Murugan, **R. Subasri**, T.N. Rao, Ashutosh S. Gandhi and B.S. Murty (2013): Synthesis, Characterization and demonstration of self-cleaning TiO₂ coatings on glass and glazed ceramic tiles, Special Issue of Progress in Organic Coatings, **76**, 1756-1760.
4. Priya Anish Mathews, K.R.C. Soma Raju, Sanjay Bhardwaj and **R. Subasri** (2013): Sol-Gel Functional Coatings for Solar Thermal Applications: A Review of Recent Patent Literature, Recent Patents on Materials Science **6**, 195-213.
5. L. Sowntharya, Ravi C. Gundakaram, K.R.C. Soma Raju and **R. Subasri** (2013): Effect of addition of surface modified nanosilica into silica-zirconia hybrid sol-gel matrix, Ceramics International, **39**, 4245-4252.
6. L. Sowntharya and **R. Subasri** (2013): A comparative study of different curing techniques for SiO₂-TiO₂ hybrid coatings on polycarbonate, Ceramics International, vol. **39**, 4689-4693.
7. K. Jeevajoithi, **R. Subasri**, K.R.C. Soma Raju (2013): Transparent, Non-fluorinated, Hydrophobic Silica Coatings with Improved Mechanical Properties, Ceramics International, **39**, 2111-2116.

2012 (total -11)

1. N. Kumar, A. Jyothirmayi and **R. Subasri** (2012): Effect of Plasma Surface Pre-Treatment on Ce³⁺-doped GPTMS-ZrO₂ Self-Healing Coatings on Aluminum Alloy, ISRN Corrosion, Volume 2012, Article ID 506560, doi:10.5402/2012/506560
2. Rekha Dom, **R. Subasri**, N. Y Hebalkar, S. A. Chary and P. H. Borse (2012): Synthesis of hydrogen producing nanocrystalline ZnFe₂O₄ visible light photocatalyst using rapid microwave irradiation method, RSC Advances, **2**, 12782-12791.

3. N. Kumar and **R. Subasri** (2012): Self-healing coatings by sol-gel process: A review of recent patent literature, *Recent Patents on Corrosion Science* **2**, 148-163.
4. K.R.C. Soma Raju, L. Sowntharya, S. Lavanya and **R. Subasri** (2012): Effect of plasma pretreatment on adhesion and mechanical properties of sol-gel nanocomposite coatings on polycarbonate, *Composite Interfaces* **19**, 259-270.
5. N. Kumar, A. Jyothirmayi, K.R.C. Soma Raju and **R. Subasri** (2012): Effect of functional groups (methyl, phenyl) on organic-inorganic hybrid sol-gel silica coatings on surface modified SS316, *Ceramics International* **38**, 6565-6572.
6. **R. Subasri**, R. Malathi, A. Jyothirmayi and N. Y Hebalkar (2012): Synthesis and characterization of CuO-Hybrid Silica Nanocomposite coatings on SS 304, *Ceramics International*, **38**, 5731-5740.
7. L. Sowntharya, S. Lavanya, G. Ravi Chandra, N.Y. Hebalkar and **R. Subasri** (2012): Investigations on the mechanical properties of hybrid nanocomposite hard coatings on polycarbonate, *Ceramics International*, **38**, 4221-4228.
8. K. Jeevajothi, D. Crossiya and **R. Subasri** (2012): Non-fluorinated, room temperature curable hydrophobic coatings by sol-gel process, *Ceramics International*, **38**, 2971-2976.
9. **R. Subasri** , C.S. Madhav, K.R.C. Soma Raju and G. Padmanabham (2012): Decorative, hydrophobic sol-gel coatings densified using near-infrared radiation, *Surf. Coat. Technol.*, **206**, 2417-2421.
10. P. Sandhyarani, M. Buchi Suresh and **R. Subasri** (2012): Investigations on the phase stability of Na⁺-conducting sodium dysprosium (phospho) silicates, *Ceramics International*, **38** , 1435–1440.
11. S. Shalini, P. Sandhyarani, Y.S. Rao, D. Chakravarty and **R. Subasri** (2012): Wet chemical synthesis and characterization of Na⁺-conducting sodium dysprosium silicates, *Ceramics International*, **38**, 295-300.

2011 (total -2)

1. Rekha Dom; R. **Subasri**, K. Radha and P.H. Borse (2011): Synthesis of solar active nanocrystalline ferrite, MFe_2O_4 (M: Ca, Zn, Mg) photocatalyst by microwave irradiation, Solid State Communications, **151**, 470-473.
2. T. Gururaj, R. **Subasri**, K.R.C. Soma Raju and G. Padmanabham (2011): Effect of plasma pretreatment on adhesion and mechanical properties of UV-curable coatings on plastics, Applied Surface Science **257**, 4360–4364.

2010 (total -5)

1. K. Rajeswari, U. S. Hareesh, R. **Subasri**, Dibyendu Chakravarty and R. Johnson (2010): Comparative Evaluation of Spark Plasma (SPS), Microwave (MWS), Two stage sintering (TSS) and Conventional Sintering (CRH) on the densification and Micro structural Evolution of fully Stabilized Zirconia Ceramics, Science of Sintering, **42**, 259-267.
2. R. **Subasri**, A. Jyothirmayi and D.S. Reddy (2010): Effect of plasma surface treatment and heat treatment ambience on mechanical and corrosion protection properties of hybrid sol-gel coatings on aluminum” , Surface and Coatings Technology, **205**, 806-813.
3. R. **Subasri**, M. Tripathi, K. Murugan , J. Revathi, G.V.N. Rao and T.N. Rao (2010): Investigations on the photocatalytic activity of sol-gel derived plain and Fe^{3+}/ Nb^{5+} - doped titania coatings on glass substrates” Materials Chemistry and Physics, **124**, 63-68.

4. Kiruthika, P., **Subasri, R.**, Jyothirmayi, A., Sarvani, K., Hebalkar, N.Y. (2010): Effect of Plasma Surface Treatment on Mechanical and Corrosion Protection Properties of UV-Curable Sol-Gel based GPTS-ZrO₂ Coatings on Mild Steel, Surface and Coatings Technology, **204** 1270-1276.

5. Ratna Sunil, B., Sivaprahasam, D. and **Subasri, R.** (2010): Microwave sintering of nanocrystalline WC–12Co: Challenges and perspectives, International Journal of Refractory Metals and Hard Materials, **28**, 180-186.

2009 (total -4)

1. K.R.C. Soma Raju, **R. Subasri**, A. Jyothirmayi, T. Gururaj, G. Padmanabham (2009) : UV-Curable Primer-cum-Paint System for Mild Steels based on Sol-Gel Coating Technology, Proceedings of SAEINDIA International Mobility Engineering Congress and Exposition, Chennai, **Paper Number:**2009-28-0052

2. Dinesh Ram, R., **Subasri, R.**, Somaraju, K.R.C., Jayaraj, K., Vedaprakash, L., Kruparatnam, Joshi, S.V. and Venkatesan, R. (2009): Biofouling studies on nanoparticle-based metal oxide coatings on glass coupons exposed to marine environment, Colloids and Surfaces B: Biointerfaces **74**, 75-83.

3. **Subasri, R.**, Asha, M., Hembram, K., Rao, G.V.N. and T.N. Rao (2009) : Microwave Sintering of Doped Nanocrystalline ZnO and Characterization for Varistor Applications, Mater. Chem. and Phys. **115**, 677-684.

4. D. Ganguli, **Subasri, R.** and Varadharajan, R. (2009): Inorganic Dispersed Phase Composites by Sol-Gel Processing: An update, in Progress in Sol-Gel Production , **391**, 121-139.

2008-2006 (total -5)

1. **Subasri, R.** and Näfe, H. (2008): Texture in Na- β -Alumina due to microwave processing, *Mater. Chem. Phys.* **112**, 16-19.

2. **Subasri, R.** and Näfe, H. (2008): Phase evolution on heat treatment of sodium silicate water glass, *J. Non Cryst. Solids* **354** 896-900.

3. Näfe, H. and **Subasri, R.** (2007): Indication of bivariance in the phase system sodium zirconate/zirconia, *J. Chem. Thermodyn.* **39 (6)** 972-977.

4. Näfe, H. and **Subasri, R.** (2007): Revision of the data on the standard Gibbs energy of formation of Sodium Zirconate, *J. Chem. Thermodyn.* **39** 22-27.

5. **Subasri, R.**, Deshpande, S., Seal, S. and Shinohara, T. (2006) : Evaluation of the performance of TiO₂-CeO₂ bilayer coatings as photoanodes for corrosion protection of copper. *Electrochem. Solid State Lett.* **9 (1)** B1-B4.

2005-2000 (total -23)

1. **Subasri, R.**, Roy, S., Matusch, D., Näfe, H. and Aldinger, F. (2005): Synthesis and structural characterization of a metastable mullite-like alumina phase. *J. Am. Ceram. Soc.* **88 (7)** 1740-1746.

2. **Subasri, R.** and Shinohara, T. (2005) : Investigations on the photoprotection ability of TiO₂ coated on copper. *Materials Science Forum* **475-479** 297-300.

3. **Subasri, R.** , Shinohara, T. and Mori, K. (2005): Modified TiO₂ coatings for cathodic protection applications. *Science and Technology of Advanced Materials* **6** 501-507.
4. **Subasri, R.** , Shinohara, T. and Mori, K. (2005): TiO₂ based photoanodes for cathodic protection of copper. *J. Electrochem. Soc.* . **152 (3)** B105-B110.
5. **Subasri, R.** and Shinohara, T. (2005) : Photoelectrochemical characterization of TiO₂ coatings derived from commercial sol for cathodic protection applications. *Special Issue of Research on Chemical Intermediates* **31** 275 – 283.
6. **Subasri, R.** and Shinohara, T. (2004) : Application of the photoeffect in TiO₂ for cathodic protection of copper. *Electrochemistry* **72 (12)** 880-884.
7. **Subasri, R** (2004): Investigations on the factors assisting a one-step synthesis cum sintering of sodium beta alumina using microwaves. *Mater. Sci. Engg B* **112** 73-78
8. **Subasri, R.** and Shinohara, T., (2004): Investigations on the applicability of SnO₂ coatings for corrosion protection to metals. *Electrochem. Solid State Lett.* **7(7)** B17-B20.
9. **Subasri, R.**, Matusch, D. , Näfe, H. and Aldinger, F. (2004) : Synthesis and characterization of (La_{1-x}M_x)₂Mo₂O_{9-d}; M = Ca²⁺, Sr²⁺ or Ba²⁺. *J. Eur. Ceram. Soc.* **24(1)** 129-137.
10. **Subasri, R.** and Shinohara, T., (2003): Investigations on SnO₂ -TiO₂ composite photoelectrodes for corrosion protection. *Electrochem. Comm.* **5(10)** 897-902.
11. **Subasri, R.**, Näfe, H. and Aldinger, F., (2003): On the electronic and ionic transport properties of La₂Mo₂O₉. *Materials Research Bulletin* **38(15)** 1965-1977.
12. **Subasri, R.** and Näfe, H. (2003): An alternative approach to characterize the equilibrium in a biphasic α-Al₂O₃/β-alumina mixture as a function of sodium activity. *Electrochimica Acta* **48(23)** 3535-3540.

13. **Subasri, R.**, Matovic, B., Näfe, H. and Aldinger, F. (2003): A low cost synthesis process for vitreous $\text{NaAlSi}_3\text{O}_8$ using sodium zeolite, *J. Non Cryst. Solids* **331(1-3)** 177-183.
14. **Subasri, R.** and Näfe, H. (2003) : Thermodynamic characterization of microwave sintered sodium beta alumina by a potentiometric technique. *Electrochem. Comm.* **5(5)** 426-430.
15. **Subasri, R.**, Mallika, C. , Mathews, T., Sastry, V. S. and Sreedharan, O. M. (2003) : Solubility studies, thermodynamics and electrical conductivity in the $\text{Th}_{1-x}\text{Sr}_x\text{O}_2$. *J. Nucl. Mater.* **312 (2-3)** 249-256.
16. **Subasri, R.**, Mathews, T., and Sreedharan, O. M. (2003) : Microwave assisted synthesis and sintering of $\text{La}_{0.8}\text{Sr}_{0.2}\text{Ga}_{0.83}\text{Mg}_{0.17}\text{O}_{2.815}$. *Mater. Lett.* **57 (12)** 1792-1797.
17. **Subasri, R.**, Mathews, T., Swaminathan, K. and Sreedharan, O. M. (2003) : Microwave assisted synthesis of $\text{La}_{1-x}\text{Sr}_x\text{CrO}_3$ and their thermodynamic characterization by fluoride emf method. *J. Alloys and Compds.* **354 (1-2)** 193-197.
18. **Subasri, R.** , Mathews, T. , Sreedharan, O. M. and Raghunathan, V. S. (2003) : Microwave processing of sodium beta alumina. *Solid State Ionics* **158 (1-2)** 199-204.
19. Mathews, T., **Subasri, R.** and Sreedharan, O. M. (2002) : A rapid combustion synthesis of MgO stabilized Sr- and Ba-beta alumina and their microwave sintering. *Solid State Ionics* **148 (1-2)** 135-143.
20. **Subasri, R.** , Mathews, T. , Swaminathan, K. and Sreedharan, O. M. (2002) : Thermodynamic Stability of Na_2ZrO_3 by solid electrolyte galvanic cell technique. *J. Nucl. Mater.* **300 (2,3)** 237-241.
21. **Subasri, R.** , Näfe, H. and Aldinger, F. (2002) : Thermoelectric power studies on MgO stabilized beta"-alumina. *J. Solid State Electrochem.* **6 (4)** 259-264.
22. **Subasri, R.** (2001) : Low temperature synthesis of sodium aluminosilicate glass - $\text{NaAlSi}_3\text{O}_8$. *Mater. Sci. and Engg. B* **86 (3)** 260-264.

23 . Mallika, C. , Sreedharan, O. M. and **Subasri, R.** (2000) : Use of air/platinum as the reference electrode in solid-oxide electrolyte emf measurements. *J. Eur. Ceram. Soc.* **20 (13)** 2297-2313.

1997-2000 (total -7)

1. **Subasri, R.** , Pankajavalli, R. and Sreedharan, O. M. (1998) : Thermodynamic stabilities of Ln_2BaO_4 (Ln = Nd, Sm, Eu, or Gd) by CaF_2 - based emf measurements. *J. Alloys and Compds.* **274 (1-2)** 153-156.

2. **Subasri, R.** and Sreedharan, O. M. (1998) : High temperature thermodynamic stabilities of RCoO_3 (R = Nd, Sm, Eu, Gd or Dy) using solid oxide- electrolyte emf technique. *J. Alloys and Compds.* **269 (1-2)** 71-74.

3. **Subasri, R.** and Sreedharan, O. M. (1997) : Thermoelectric power studies on alpha alumina-sodium beta alumina composite electrolyte. *Phys. Stat. Sol. a* **164 (2)** 679-682.

4. **Subasri, R.** , Pankajavalli, R. and Sreedharan, O. M. (1997) : High temperature stabilities of ternary oxides in the Sm-Cu-O system. *Physica C* **281 (1)** 85-90.

5. **Subasri, R.** , Sreedharan, O. M. and Bhat, N. P. (1996) : Evaluation of performance of alpha + beta alumina composite electrolyte for oxygen potential measurements. *Trans. SAEST.* **31** 59-66.

6. **Subasri, R.** and Sreedharan, O. M. (1997) : Thermodynamic stability of Li_3NbO_4 by e.m.f. measurements using a novel composite electrolyte. *Solid State Ionics* **93** 341-346.

7. **Subasri, R.** and Sreedharan, O. M. (1997) : High temperature thermodynamic stability of LiTa_3O_8 from emf measurements using alpha + beta alumina as solid electrolyte. *Mater. Lett.* **30** 289-292.

Other information:

1. Involved in setting up a state-of-the-art technology demonstration centre for sol-gel coatings in collaboration with a German company and undertaking projects to demonstrate scale-up feasibility of sol-gel coating technology
2. Actively involved in organizing two business opportunity workshops for entrepreneurs all over India for demonstrating the sub- processes of sol-gel coating technology
3. Regular Reviewer for SCI Journals namely Progress in Organic Chemistry, Journal of Non-Crystalline Solids, ACS Applied Materials and Interfaces, Solar Energy Materials and Solar Cells, Journal of Alloys and Compounds, Materials Research Bulletin, Journal of Applied Electrochemistry and Applied Surface Science.