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Journal Publications:

1. Chetan C. Singh and **Emila Panda**, Effect of intrinsic electronic defect states on the morphology and optoelectronic properties of Sn-rich SnS particles, Journal of Applied Physics, vol. 123, 174904 (pp. 8), 2018.
2. Chetan C. Singh and **Emila Panda**, Zinc interstitial threshold in Al-doped ZnO film: Effect on microstructure and optoelectronic properties, Journal of Applied Physics, vol. 123, 165106 (pp. 10), 2018.
3. Deepak Dwivedi, Tvarit A. Patel and **Emila Panda**, Simple, inexpensive way of fabricating high quality Zn(O)S nanoparticles by varying *p*H, Materials Science in Semiconductor Processing, vol. 79, pp. 1-6, 2018.
4. Tvarit A. Patel, Chetan C. Singh and **Emila Panda**, Microstructure influenced variation in the local surface electrical heterogeneity in thickening Al-doped ZnO films: Evidence using both scanning tunneling spectroscope and conductive atomic force microscope, Materials Science in Semiconductor Processing, vol. 75, pp. 65-74, 2018.
5. Krishna Manwani, Arout J. Chelvane and **Emila Panda**, Oxidation of $TbFe_2$: Microstructure of oxide-film by both theory and experiment, Corrosion Science, vol. 130, pp. 153-160, 2018.
6. Narendra Bandaru, Darshan Ajmera, Krishna Manwani, Sasmita Majhi and **Emila Panda**, Microstructural analysis of multi-phase ultra-thin oxide overgrowth on Al-Mg alloy by high resolution transmission electron microscopy, Transactions of the Indian Institute of Metals, vol. 70, pp. 1269-1275, 2017.
7. Tvarit Patel and **Emila Panda**, Interpreting the Conductive Atomic Force Microscopy measured inhomogeneous nanoscale surface electrical properties of Al-doped ZnO films, Surface and Interface Analysis, vol. 48, pp. 1384-1391, 2016.
8. Chetan Singh and **Emila Panda**, Variation of electrical properties in thickening Al-doped ZnO films: Role of defect chemistry, RSC Advances, vol. 6, pp. 48910-48918, 2016.
9. Darshan Ajmera and **Emila Panda**, Stability of ultra-thin oxide overgrowths on binary Al-Si alloy substrate, Journal of Materials Science, vol. 51, pp. 4902-4916, 2016.
10. Darshan Ajmera and **Emila Panda**, Thermodynamics of ultra-thin oxide overgrowths on Al-Mg alloys: Role of Interface energy, Corrosion Science, vol. 102, pp. 425-436, 2016.
11. C. C. Singh, T. A. Patel and **E. Panda**, Relation between surface and bulk electronic properties of Al doped ZnO films deposited at varying substrate temperature by RF Magnetron Sputtering, Journal of Applied Physics, vol. 117, 245312 (pp. 9), 2015.
12. Krishna Manwani and **Emila Panda,** Thermodynamics of interface formation between Hexa–Peri Hexabenzocoronene and Cupric oxide, Thin Solid Films, vol. 577, pp. 6-10, 2015.
13. Chopra, **E. Panda**, Y. Kim, M. Arredondo and D. Hesse, "Epitaxial ferroelectric $Pb(Mg_{1/3}Nb_{2/3})O_3$-$PbTiO_3$ thin films on $La_{0.7}Sr_{0.3}MnO_3$ bottom electrode", Journal of Electroceramics, vol. 32, pp. 404-408, 2014.
14. **Emila Panda** and Krishna Manwani. "Role of interface(s) for the growth of ultra-thin amorphous oxides on Al-Si alloys: A thermodynamic analysis", Journal of the American Ceramic Society, vol. 97, no. 2, pp. 465-472, 2014.
15. **E. Panda**, L.P.H. Jeurgens and E.J. Mittemeijer, "Interface thermodynamics of ultrathin, amorphous oxide overgrowths on AlMg alloys", Acta Materialia, vol. 58, pp. 1770-1781, 2010.
16. **E. Panda**, L.P.H. Jeurgens and E.J. Mittemeijer, "Growth kinetics and mechanism of the initial oxidation of Al-based Al-Mg alloys", Corrosion Science, vol. 52, pp. 2556-2564, 2010.

17. **E. Panda**, L.P.H. Jeurgens and E.J.Mittemeijer, “Effect of in-vacuo surface pretreatment on the microstructure and growth kinetics of the ultra-thin oxide films grown on Al-Mg alloy substrates”, Surface Science, vol. 604, pp. 587-594, 2010.
18. **E. Panda**, L.P.H. Jeurgens, G. Richter and E.J. Mittemeijer, “The amorphous to crystalline transition of ultrathin (Al,Mg)-oxide films grown by thermal oxidation of AlMg alloys; a high-resolution transmission electron microscopy investigation”, Journal of Materials Research, vol. 25, pp. 871-879, 2010.
19. **E. Panda**, L.P.H. Jeurgens and E.J. Mittemeijer, “The initial oxidation of Al-Mg alloys: Depth-resolved quantitative analysis by angle-resolved x-ray photoelectron spectroscopy and real-time in-situ ellipsometry”, Journal of Applied Physics, vol. 106, pp. 114913(1-13), 2009.
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Conference Presentations/Proceedings

1. Narendra Bandaru and **Emila Panda**, "Annealing induced transformation and enhancement in the electronic defect states of AZO thin films and their correlation with electrical properties", in *the International Conference on Nano-materials for Energy Conversion and Storage Applications*, Pandit Deendayal Petroleum University, Gandhinagar, IN, Jan. 29-31, 2018.
2. Chetan Singh and **Emila Panda**, "Intrinsic defect-induced modification in morphology and optoelectronic properties for Sn-rich SnS", in *the International Conference on Nano-materials for Energy Conversion and Storage Applications*, Pandit Deendayal Petroleum University, Gandhinagar, IN, Jan. 29-31, 2018.
3. Priyanka Rawat, Babji Srinivasan and **Emila Panda**, "An overview of system input & structural parameter’s influence on optoelectronic properties in AZO thin films", in *the International Conference on Nano-materials for Energy Conversion and Storage Applications (NECSA-2018)*, Pandit Deendayal Petroleum University, Gandhinagar, IN, Jan. 29-31, 2018.
4. Narendra Bandaru and **Emila Panda**, Annealing induced electronic defect state transformation in Al-doped ZnO films. International Conference on Materials Engineering (ICME - 2017), Indian Institute of Technology Kanpur, India, 2nd – 4th June, 2017.
5. Tvarit Patel and **Emila Panda**, Influence of reducing agent on synthesis of precise controlled copper sulfide composition using copper-thiourea complex as a self-sacrifice template. International Conference on Materials Engineering (ICME - 2017), Indian Institute of Technology Kanpur, India, 2nd – 4th June, 2017.
6. Narendra Bandaru and **Emila Panda**, Influence of zinc interstitials and oxygen vacancies in carrier concentrations of Al doped ZnO thin films fabricated by sol-gel spin coating. International Conference on Functional Materials (ICFM), Indian Institute of Technology Kharagpur, India, 12th–14th December, 2016.
7. Tvarit Patel and **Emila Panda**, Role of tip geometry in Conductive Atomic Force Microscopy for investigating nanoscale surface electrical properties of Al-doped ZnO films. International Conference on Functional Materials (ICFM), Indian Institute of Technology Kharagpur, India, 12th–14th December, 2016.
8. Chetan Singh and **Emila Panda**, Shape dependent optoelectronic properties of SnS powders through optical and scanning tunneling spectroscopy. International Conference on Functional Materials (ICFM), Indian Institute of Technology Kharagpur, India, 12th–14th December, 2016.
9. **Emila Panda**, 2016. Interpreting the optoelectronic properties in Al doped ZnO films: Role of microstructure and associated defect chemistry. 54th National Metallurgists’ Day & 70th Annual Technical Meeting of The Indian Institute of Metals, 11th – 14th November, IIT Kanpur, Kanpur.
10. Narendra Bandaru and **Emila Panda**, Oxidation behavior of rare earth SmCo5 magnetic thin films. 4th International Conference for Advanced Materials and Materials Processing (ICAMMP-IV), Indian Institute of Technology Kharagpur, India, 5th – 7th November, 2016.

11. Krishna Manwani, Darshan Ajmera and **Emila Panda**, Thermodynamics of ultra-thin oxide overgrowths on binary AlSi alloys. 4th International Conference for Advanced Materials and Materials Processing (ICAMMP-IV), Indian Institute of Technology Kharagpur, India, 5th – 7th November, 2016.

12. **Emila Panda**, Understanding the origin of optoelectronic properties in Al doped ZnO films. EApp-2016, 27th – 29th June, Satyabhama university, Chennai, 2016 (Invited talk).

13. Chetan C. Singh and **Emila Panda**, Understanding the origin of electrical properties in Al doped ZnO films. EMRS Spring Meeting, Lille, France, 2nd – 6th May, 2016.

14. Chetan C. Singh, Tvarit A. Patel and **Emila Panda**, Interpreting the surface electrical heterogeneity of Al doped ZnO films. IWPSD 2015, 7th – 10th December, IISc Bangalore, India, 2015.

15. Chetan Singh, Tvarit Patel and **Emila Panda**, Relating surface and bulk electronic properties of Al-doped ZnO films deposited by varying substrate temperature at RF magnetron sputtering. ICMAT 2015, 28th June – 3rd July, Suntec city, Singapore, 2015.

16. Tvarit Patel, Chetan Singh and **Emila Panda**, "Study of nanoscale local conductance of Al doped ZnO thin films with substrate temperature by Conducting probe Atomic Force Microscopy analysis", EMRS Fall Meeting, Warsaw University of Technology, Poland, pp. 79, 2014.

17. **E. Panda**. A high-resolution transmission electron microscopy analysis to understand the growth of multi phase oxide-films due to thermal oxidation of Al-Mg alloys. EMSI 2014, 9th – 11th July, New Delhi, India, 2014.

18. **E. Panda** and K. Manwani. Role of interface(s) for the growth of ultra-thin amorphous oxides on Al-Si alloys. ICMAT 2013, 30th June - 5th July, Suntec city, Singapore, 2013.

19. **E. Panda**, L.P.H. Jeurgens, G. Richter and E.J. Mittemeijer, "Microstructural evolution of ultra-thin oxide films grown on Al-Mg alloys at low temperatures", Proceedings of 13th European Conference on Applications of Surface and Interface Analysis pp. 182, 2009.

20. **E. Panda**, L.P.H. Jeurgens and E.J. Mittemeijer, *Effect of surface pre-treatment on the initial, thermal oxidation of Al-1.12 at% Mg surfaces*, Proceedings of 14th International Conference on Thin Films *&* Reactive Sputter Deposition 2008, p. 49, 2008.

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22. **E. Panda**, P.K. Sahoo, S.K. Singh, S. Bhattacharjee, P.K. Mishra and R.K. Galgali, *Preparation of synthetic rutile by plasma smelting of ilmenite*, Proceedings of 39th National Metallurgists' Day & 55th Annual Technical Meeting of The Indian Institute of Metals, p. 38, 2001.