

Research Outputs:

Publications

1. E. Coetsee, H. C. Swart and J. J. Terblans, Degradation of $Y_2SiO_5:Ce$ phosphor powders, *J. Lumin.*, **126(1)** (2007) 37. (Best M.Sc publication in the CMPMS division at SAIP 2007).
2. E. Coetsee, H. C. Swart, J. J. Terblans, O. M. Ntwaeaborwa, K. T. Hillie, W. A. Jordaan and U. Buttner, Characterization of $Y_2SiO_5:Ce$ thin films, *Opt. Mat.*, **29(11)** (2007) 1338.
3. E. Coetsee, H. C. Swart and J. J. Terblans, Cathodoluminescence degradation of $Y_2SiO_5:Ce$ thin films, *JVST A*, **25(4)** (2007) 1226.
4. H. C. Swart, J. J. Terblans, E. Coetsee, O. M. Ntwaeaborwa, M. S. Dhlamini, S. Nieuwoudt and P. H. Holloway, Review on electron stimulated surface chemical reaction mechanism for phosphor degradation, *JVST A*, **25(4)** (2007) 917.
5. E. Coetsee, J. J. Terblans, H. C. Swart, Degradering van $Y_2SiO_5:Ce$ fosforpoeier, *Die Suid-Afrikaanse Tydskrif vir Natuurwetenskap en Tegnologie (SAAWK)*, **26(2)** (2007) 151.
6. J. J. Dolo, J. J. Terblans, B. F. Dejene, O. M. Ntwaeaborwa, E. Coetsee and H. C. Swart, Degradation of commercially $Gd_2O_2S:Tb$ phosphor, *Phys.Stat.Sol. (c)*, **5(2)** (2008) 594.
7. E. Coetsee, J. J. Terblans and H. C. Swart, $Y_2SiO_5:Ce$ thin films grown by PLD, *Phys.Stat.Sol. (c)*, **5(2)** (2008) 634.
8. S. B. Mishra, A. K. Mishra, A. S. Luyt, N. Revaprasadu, K. T. Hillie, W. J. v. d. M. Steyn, E. Coetsee and H. C. Swart, Ethyl vinyl acetate copolymer - $SrAl_2O_4:Eu,Dy$ and $Sr_4Al_{14}O_{25}:Eu,Dy$ phosphors based composites: Preparation and Material properties, *Polymer Composites, J. Appl. Polymer. Sci.*, **115** (2010) 579.
9. H. C. Swart, E. Coetsee, J. J. Terblans, J. M. Fitz-Gerald and J. R. Botha, Luminescence of $Y_2SiO_5:Ce$ nanocrystalline thin films, *EJSSNT*, **7** (2009) 369.
10. S. B. Mishra, A. K. Mishra, N. Revaprasadu, K. T. Hillie, W. J. v. d. M. Steyn, E. Coetsee and H. C. Swart, Strontium Aluminate/Polymer Composites: Morphology, Luminescent Properties, and Durability, *J. Appl. Polymer. Sci.*, **112(6)** (2009) 3347.
11. H. C. Swart, J. J. Terblans, O. M. Ntwaeaborwa, E. Coetsee, B. M. Mothudi and M. S. Dhlamini, Photon emission mechanisms of different phosphors, *Nucl. Instr. and Meth. B*, **267 (16)** (2009) 2630.
12. E. Coetsee, J. R. Botha, J. J. Terblans en H. C. Swart, Luminesserende eienskappe van $Y_2SiO_5:Ce$ nano-dunlagies, *Die Suid-Afrikaanse Tydskrif vir Natuurwetenskap en Tegnologie (SAAWK)*, **27(2)** (2008) 146.
13. S. Nieuwoudt, J. J. Terblans, J. Ngaruiya, O. M. Ntwaeaborwa, E. Coetsee, K. T. Hillie en H. C. Swart, Luminessensie-eienskappe van $SrAl_2O_4:Eu^{2+}$, Dy^{3+} fosfor, *Die Suid-Afrikaanse Tydskrif vir Natuurwetenskap en Tegnologie (SAAWK)*, **27(2)** (2008) 154.
14. D. B. Bem, H. C. Swart, A. S. Luyt, E. Coetsee, F. B. Dejene, Properties of Green $SrAl_2O_4$ Phosphor in LDPE and PMMA Polymers, *J. Appl. Polymer. Sci.*, accepted March 2009. APP-2009-02-0338.

15. E. Coetsee, J. J. Terblans and H. C. Swart, Characteristic properties of $Y_2SiO_5:Ce$ thin films grown with PLD, *Physica B*, **404** (2009) 4431.
16. H. C. Swart, E. Coetsee, J. J. Terblans and O. M. Ntwaeaborwa, Luminescent mechanism of $Y_2SiO_5:Ce$ phosphor powder, *Physica B*, **404** (2009) 4426.
17. P. D. Nsimama, O. M. Ntwaeaborwa, E. Coetsee and H. C Swart, The influence of the number of pulses on morphological and photoluminescence properties of $SrAl_2O_4:Eu^{2+}, Dy^{3+}$ thin films prepared by pulsed laser deposition, *Physica B*, **404** (2009) 4489.
18. O. M. Ntwaeaborwa, P. D. Nsimama, J. T. Abiade, E. Coetsee and H. C Swart, The effect of substrate temperature and oxygen pressure on the structure and photoluminescence properties of pulsed laser deposited $SrAl_2O_4:Eu^{2+}, Dy^{3+}$ thin films, *Physica B*, **404** (2009) 4436.
19. L. F. Koao, H. C. Swart, E. Coetsee, M. M. Biggs and F. B. Dejene, The effect of Mg^{2+} ions co-doping on the structural and optical properties Ce^{3+} doped Silica glasses, *Physica B*, **404** (2009) 4499.
20. E. Coetsee, J. J. Terblans and H. C. Swart, The growth of $Y_2SiO_5:Ce$ thin films with pulsed laser deposition, 10th International Conference on Laser Ablation (COLA 2009), accepted January 2010.
22. H. C. Swart, E. Coetsee, J. J. Terblans, O. M. Ntwaeaborwa, P. D. Nsimama and J. J. Dolo, Cathodoluminescence degradation of PLD thin films, 10th International Conference on Laser Ablation (COLA 2009), in preparation.
23. H. C. Swart, J. J. Terblans, E. Coetsee, V. Kumar, O. M. Ntwaeaborwa and M. M. Biggs, Auger Electron Spectroscopy and X-ray Photoelectron Spectroscopy study of the electron stimulated surface chemical reaction mechanism for phosphor degradation, accepted January 2009, SIA-09-0395.R1.

Proceedings

1. E. Coetsee, H. C. Swart, J. J. Terblans, O. M. Ntwaeaborwa, K. T. Hillie, W. A. Jordaan and U. Buttner, Characterization (EDS, SEM AND AFM) of $Y_2SiO_5:Ce$ thin films grown with PLD, Proceedings of the 45th Annual Conference of the Microscopy Society of Southern Africa, **36** (2006) 31.
2. H. C. Swart, B. M. Mothudi, S. Nieuwoudt, J. J. Terblans, E. Coetsee, O. M. Ntwaeaborwa, Luminescent properties and degradation of $SrAl_xO_y:Eu^{2+}, Dy^{3+}$ phosphors, Proceedings - 14th International Workshop on Inorganic and Organic Electroluminescence & 2008 International Conference on the Science and Technology of Emissive Displays and Lighting, 367