

## Me E Coetsee

1. E. Coetsee, H. C. Swart and J. J. Terblans, Degradation of  $\text{Y}_2\text{SiO}_5:\text{Ce}$  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. Ntwaeborwa, K. T. Hillie, W. A. Jordaan and U. Buttner, Characterization of  $\text{Y}_2\text{SiO}_5:\text{Ce}$  thin films, *Opt. Mat.*, **29(11)** (2007) 1338.
3. E. Coetsee, H. C. Swart and J. J. Terblans, Cathodoluminescence degradation of  $\text{Y}_2\text{SiO}_5:\text{Ce}$  thin films, *JVST A*, **25(4)** (2007) 1226.
4. H. C. Swart, J. J. Terblans, E. Coetsee, O. M. Ntwaeborwa, 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  $\text{Y}_2\text{SiO}_5:\text{Ce}$  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. Ntwaeborwa, E. Coetsee and H. C. Swart, Degradation of commercially  $\text{Gd}_2\text{O}_2\text{S}:\text{Tb}$  phosphor, *Phys.Stat.Sol. (c)*, **5(2)** (2008) 594.
7. E. Coetsee, J. J. Terblans and H. C. Swart,  $\text{Y}_2\text{SiO}_5:\text{Ce}$  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 -  $\text{SrAl}_2\text{O}_4:\text{Eu},\text{Dy}$  and  $\text{Sr}_4\text{Al}_{14}\text{O}_{25}:\text{Eu},\text{Dy}$  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  $\text{Y}_2\text{SiO}_5:\text{Ce}$  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. Ntwaeborwa, 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  $\text{Y}_2\text{SiO}_5:\text{Ce}$  nano-dunlagies, *Die Suid-Afrikaanse Tydskrif vir Natuurwetenskap en Tegnologie (SAAWK)*, **27(2)** (2008) 146.
13. S. Nieuwoudt, J. J. Terblans, J. Ngaruuya, O. M. Ntwaeborwa, E. Coetsee, K. T. Hillie en H. C. Swart, Luminessensie-eienskappe van  $\text{SrAl}_2\text{O}_4:\text{Eu}^{2+}, \text{Dy}^{3+}$  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  $\text{SrAl}_2\text{O}_4$  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  $\text{Y}_2\text{SiO}_5:\text{Ce}$  thin films grown with PLD, *Physica B*, **404** (2009) 4431.
16. H. C. Swart, E. Coetsee, J. J. Terblans and O. M. Ntwaeborwa, Luminescent mechanism of  $\text{Y}_2\text{SiO}_5:\text{Ce}$  phosphor powder, *Physica B*, **404** (2009) 4426.
17. P. D. Nsimama, O. M. Ntwaeborwa, E. Coetsee and H. C. Swart, The influence of the number of pulses on morphological and photoluminescence properties of  $\text{SrAl}_2\text{O}_4:\text{Eu}^{2+}, \text{Dy}^{3+}$  thin films prepared by pulsed laser deposition, *Physica B*, **404** (2009) 4489.
18. O. M. Ntwaeborwa, 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  $\text{SrAl}_2\text{O}_4:\text{Eu}^{2+}, \text{Dy}^{3+}$  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  $\text{Mg}^{2+}$  ions co-doping on the structural and optical properties  $\text{Ce}^{3+}$  doped Silica glasses, *Physica B*, **404** (2009) 4499.
20. E. Coetsee, J. J. Terblans and H. C. Swart, The growth of  $\text{Y}_2\text{SiO}_5:\text{Ce}$  thin films with pulsed laser deposition, 10<sup>th</sup> International Conference on Laser Ablation (COLA 2009), accepted January 2010.
21. H. C. Swart, E. Coetsee, J. J. Terblans, O. M. Ntwaeborwa, P. D. Nsimama and J. J. Dolo, Cathodoluminescence degradation of PLD thin films, 10<sup>th</sup> International Conference on Laser Ablation (COLA 2009), submitted November 2009.
22. H. C. Swart, J. J. Terblans, E. Coetsee, V. Kumar, O. M. Ntwaeborwa and M. M. Biggs, Auger Electron Spectroscopy and X-ray Photoelectron Spectroscopy study of the electron stimulated surface chemical reaction mechanism for phosphor degradation, submitted August 2009.
23. J. J. Dolo, O. M. Ntwaeborwa, J. J. Terblans, E. Coetsee, B. F. Dejene, M-M Biggs and H.C. Swart, The effect of oxygen pressure on the structure, morphology and photoluminescence intensity of pulsed laser deposited  $\text{Gd}_2\text{O}_2\text{S}:\text{Tb}^{3+}$  thin film phosphor, 10<sup>th</sup> International Conference on Laser Ablation (COLA 2009), accepted January 2010.

Proceedings:

1. E. Coetsee, H. C. Swart, J. J. Terblans, O. M. Ntwaeborwa, K. T. Hillie, W. A. Jordaan and U. Buttner, Characterization (EDS, SEM AND AFM) of  $\text{Y}_2\text{SiO}_5:\text{Ce}$  thin films grown with PLD, Proceedings of the 45<sup>th</sup> 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. Ntwaeborwa, Luminescent properties and degradation of  $\text{SrAl}_x\text{O}_y:\text{Eu}^{2+},\text{Dy}^{3+}$  phosphors, Proceedings - 14<sup>th</sup> International Workshop on Inorganic and Organic Electroluminescence & 2008 International Conference on the Science and Technology of Emissive Displays and Lighting, 367.

Conferences:

SAIP:

1. E. Coetsee, J. J. Terblans, O. M. Ntwaeborwa, U. Buttner and H. C. Swart, Characterization of Pulsed Laser Ablated Cerium doped Yttrium Silicate ( $\text{Y}_2\text{SiO}_5:\text{Ce}$ ) thin films on Si (100), SAIP Pretoria 2005.
2. E. Coetsee, H. C. Swart, J. J. Terblans, O. M. Ntwaeborwa, K. T. Hillie, W. A. Jordaan and U. Buttner, Cathodoluminescence of  $\text{Y}_2\text{SiO}_5:\text{Ce}$  thin films, SAIP UWC 2006. (Best M.Sc poster in the CMPMS devision).
3. E. Coetsee, H. C. Swart and J. J. Terblans, Degradation of  $\text{Y}_2\text{SiO}_5:\text{Ce}$  phosphor powders, SAIP UWC 2006.
4. E. Coetsee, J. J. Terblans and H. C. Swart, Luminescent properties of  $\text{Y}_2\text{SiO}_5:\text{Ce}$  thin films, SAIP Wits 2007.
5. S. Nieuwoudt, J. J. Terblans, O. M. Ntwaeborwa, E. Coetsee, K. T. Hillie and H. C. Swart, Luminescent properties of nanoparticle  $\text{SrAl}_2\text{O}_4:\text{Eu}^{2+},\text{Dy}^{3+}$  phosphor, SAIP Wits 2007.
6. J. J. Dolo, J. J. Terblans, E. Coetsee, B. F. Dejene and H. C. Swart, Degradation of  $\text{Gd}_2\text{O}_2\text{S}:\text{Tb}$  phosphor, SAIP Wits 2007.
7. P. D. Nsimama, O. M. Ntwaeborwa, E. Coetsee and H. C. Swart, The changes on properties of pulsed laser ablated  $\text{SrAl}_2\text{O}_4:\text{Eu}^{2+}, \text{Dy}^{3+}$  thin films with the deposition parameters; a case of working atmosphere, SAIP UKN Durban, July 2009.
8. L. F. Koao, H. C. Swart, E. Coetsee, M. M. Biggs and F. B. Dejene, The effect of temperature on the photoluminescence characteristics of Ce;Al or Ce;Mg doped  $\text{SiO}_2$ . Durban, July (2009).

International and other:

1. E. Coetsee, H. C. Swart, J. J. Terblans O. M. Ntwaeborwa, K. T. Hillie and U. Buttner, Energy Dispersive Spectroscopy (EDS), Scanning Electron (SEM) and Atomic Force Microscopy (AFM) of  $\text{Y}_2\text{SiO}_5:\text{Ce}$  thin films, MSSA at NMMU December 2006.
2. H. C. Swart, J. J. Terblans, E. Coetsee, O. M. Ntwaeborwa, M. S. Dlamini and P. H. Holloway, A short review on the ESSCR mechanism for phosphor degradation, AVS 53<sup>rd</sup> International Symposium & Exhibition, San Francisco, CA, USA, 12- 17 November 2006.
3. E. Coetsee, J. J. Terblans and H. C. Swart, Cathodoluminescence Degradation of  $\text{Y}_2\text{SiO}_5:\text{Ce}$  Thin Films, AVS 53<sup>rd</sup> International Symposium & Exhibition, San Francisco, CA, USA, 12 - 17 November 2006.
4. E. Coetsee, H. C. Swart en J. J. Terblans, Degradering van  $\text{Y}_2\text{SiO}_5:\text{Ce}$  fosfor poeiers, Afrikaanse studente symposium, SAAWK by Noordwes Universiteit, 2 November 2006. (Mathematica prize.)
5. E. Coetsee, H. C. Swart and J. J. Terblans,  $\text{Y}_2\text{SiO}_5:\text{Ce}$  thin films grown by PLD Kariega 2007, Conference on Photonic Materials, Kariega Game Reserve, South Africa, 2 - 6 May 2007.

6. J. J. Dolo, J. J. Terblans, B. F. Dejene, E. Coetsee and H. C. Swart, Degradation of commercially  $\text{Gd}_2\text{O}_3:\text{Tb}$  phosphor. Kariega 2007, Conference on Photonic Materials, Kariega Game Reserve, South Africa, 2 - 6 May.
7. O. M. Ntwaeborwa, J. M. Ngaruiya, E. Coetsee, H. C. Swart, Enhanced luminescence of  $\text{SiO}_2:\text{Tb}^{3+}$  induced by an energy transfer from encapsulated  $\text{ZnO}$  nanoparticles, International Center for Materials Research (ICMR), Zululand, 29th July-1st August 2007.
8. E. Coetsee, J. R. Botha, J. J. Terblans en H.C. Swart, Luminesserende eienskappe van  $\text{Y}_2\text{SiO}_5:\text{Ce}$  nano dun films, Afrikaanse studente symposium, SAAWK TUT Pretoria, 2 November 2007. (Mathematica prize.)
9. S. Nieuwoudt, J. J. Terblans, J. Ngaruiya, O. M. Ntwaeborwa, E. Coetsee, K. T. Hillie en H. C. Swart, Luminessensie-eienskappe van  $\text{SrAl}_2\text{O}_4:\text{Eu}^{2+}$ ,  $\text{Dy}^{3+}$  fosfor, Afrikaanse studente symposium, SAAWK TUT Pretoria, 2 November 2007.
10. J. M. Ngaruiya, O. M. Ntwaeborwa, E. Coetsee and H. C. Swart, African Material Research Society conference, Dar es Salaam Tanzania, December 2007.
11. H. C. Swart, E. Coetsee, J. J. Terblans, J. M. Fitz-Gerald and J. R. Botha, Luminescence of  $\text{Y}_2\text{SiO}_5:\text{Ce}$  nanocrystalline thin films, 14<sup>th</sup> International Conference on Solid Films and Surfaces, Trinity College, Dublin, Ireland, 29<sup>th</sup> June - 4<sup>th</sup> of July 2008.
12. H. C. Swart, B. M. Mothudi, S. Nieuwoudt, J. J. Terblans, E. Coetsee, O. M. Ntwaeborwa, Luminescent properties and degradation of  $\text{SrAl}_x\text{O}_y:\text{Eu}^{2+},\text{Dy}^{3+}$  phosphors, 14<sup>th</sup> International Workshop on Inorganic and Organic Electroluminescence & 2008 International Conference on the Science and Technology of Emissive Displays and Lighting, Bagni di Tivoli, Rome, Italy, 9-12 September 2008.
13. H. C. Swart, J. J. Terblans, O. M. Ntwaeborwa, E. Coetsee and M. S. Dlamini, Photon emission mechanisms of different phosphors, 23<sup>th</sup> ICACS (International Conference on Atomic Collisions in Solids), Phalaborwa, Limpopo province of South Africa, 17 - 22 August 2008.
14. E. Coetsee, J. J. Terblans en H. C. Swart, Luminesserende meganisme van yttriumsilikaat gedoteer met serium ( $\text{Y}_2\text{SiO}_5:\text{Ce}$ ) fosfor poeier, Afrikaanse studente simposium, SAAWK UJ, 31 Oktober 2008. (Mathematica prize.)
15. E. Coetsee, J. J. Terblans and H. C. Swart, Characteristic properties of  $\text{Y}_2\text{SiO}_5:\text{Ce}$  thin films grown with PLD, 3<sup>rd</sup> South African Conference on Photonic Materials (SACPM 2009) Mabula March 2009.
16. H. C. Swart, E. Coetsee, J. J. Terblans and O. M. Ntwaeborwa, Luminescent mechanism of  $\text{Y}_2\text{SiO}_5:\text{Ce}$  phosphor powder, 3<sup>rd</sup> South African Conference on Photonic Materials (SACPM 2009), Mabula, March 2009.
17. O. M. Ntwaeborwa, P. D. Nsimama, E. Coetsee and H. C Swart, The effect of substrate temperature and oxygen pressure on the structure and photoluminescence properties of pulsed laser deposited  $\text{SrAl}_2\text{O}_4:\text{Eu}^{2+},\text{Dy}^{3+}$  thin films, 3<sup>rd</sup> South African Conference on Photonic Materials (SACPM 2009) Mabula, March 2009.
18. P. D. Nsimama, O. M. Ntwaeborwa, E. Coetsee and H. C Swart, The influence of the number of pulses on morphological and photoluminescence properties of  $\text{SrAl}_2\text{O}_4:\text{Eu}^{2+}$ ,  $\text{Dy}^{3+}$  thin films prepared by pulsed laser deposition, 3<sup>rd</sup> South African Conference on Photonic Materials (SACPM 2009) Mabula, March 2009.
19. L. F. Koao, H. C. Swart, E. Coetsee, M. M. Biggs and F. B. Dejene, The effect of  $\text{Mg}^{2+}$  ions co-doping on the structural and optical properties  $\text{Ce}^{3+}$  doped Silica glasses, 3<sup>rd</sup> South African Conference on Photonic Materials (SACPM 2009) Mabula, March 2009.
20. E. Coetsee, J. J. Terblans and H. C. Swart, The growth of  $\text{Y}_2\text{SiO}_5:\text{Ce}$  thin films with pulsed laser deposition, 10<sup>th</sup> International Conference on Laser Ablation (COLA 2009) Singapore, November 22-27.
21. H. C. Swart, E. Coetsee, J. J. Terblans, O. M. Ntwaeborwa, P. D. Nsimama and J. J. Dolo, Cathodoluminescence degradation of PLD thin films, 10<sup>th</sup> International Conference on Laser Ablation (COLA 2009) Singapore, November 22-27.

22. J. J. Dolo, H. C. Swart, J. J. Terblans, E. Coetsee, O. M. Ntwaeborwa and B. F. Dejene, Effect of oxygen pressure on structural properties of pulsed laser deposition  $\text{Gd}_2\text{O}_2\text{S}$ : Tb thin films, International Conference on Nanotechnology and Advanced Materials 2009. (ICNAM 2009), University of Bahrain, 4 to 7 May 2009.
23. A. G. Ali, H. C. Swart, J. R. Botha, E. Coetsee, M. M. Biggs and F. B. Dejene, Structural and optical properties of  $\text{ZnO}$ ,  $\text{SiO}_2:\text{Ce}^{3+}$  and  $\text{ZnO}:\text{SiO}_2:\text{Ce}^{3+}$  nano-particles prepared by a Sol-Gel process, International Conference on Nanotechnology and Advanced Materials 2009. (ICNAM 2009), University of Bahrain, 4 to 7 May 2009.
24. H. C. Swart, J. J. Terblans, E. Coetsee, V. Kumar, O. M. Ntwaeborwa and M. M. Biggs, Auger Electron Spectroscopy and X-ray Photoelectron Spectroscopy study of the electron stimulated surface chemical reaction mechanism for phosphor degradation. Ecasia09, 13<sup>th</sup> European Conference on Applications of Surface and Interface Analysis, Antalya, Turkey, October 18-23, 2009.
25. J. J. Dolo, O. M. Ntwaeborwa, J. J. Terblans, E. Coetsee, B. F. Dejene, M-M Biggs and H.C. Swart, The effect of oxygen pressure on the structure, morphology and photoluminescence intensity of pulsed laser deposited  $\text{Gd}_2\text{O}_2\text{S}:\text{Tb}^{3+}$  thin film phosphor, 10<sup>th</sup> International Conference on Laser Ablation (COLA 2009) Singapore, November 22-27.