Faculty Vitae

Name of the Faculty:

Dr.G. BALAKRISHNAN

Education

S.No	Degree	Discipline	University	Year
1	B.Sc.	Physics	M.K.U., Madurai	1997
2	M.Sc.	Physics	Bharathiar University Coimbatore	1999
3	M.Phil.	Thin Film Technology	Bharathiar University Coimbatore	2001
4	Ph.D.	Thin Film/Nano Technology	NIT-Tiruchirapalli	2010
5	Post Doc.	Thin Film/Nano Technology	Changwon National University, Changwon, South Korea	Feb.2012 Aug.2013

Academic experience

Institution	Title	From	To	FT/PT
Bharath Institute of Higher Education & Research	Associate Professor	Sep 2013	Till Date	FT
Chanwon National University, Changwon, South Korea	Research Professor	Feb. 2012	Aug. 2013	FT
PERI Institute of Technology, Chennai, India.	Assistant Professor	Aug. 2010	Jan. 2012	FT
Vivekananda college of Arts and Sciences (W), Tiruchengode, India	Senior Lecturer	July 2004	March 2006	FT
Vivekananda College, Madurai, India	Lecturer	June 2003	April 2004	FT
Rama Prabha College of Arts and Science, Dindigul, Tamilnadu, India.	Lecturer	June 2001	April 2003	FT

Certifications or professional registrations

Nil

Membership in professional organizations

Life membership in Materials Research Society of India (MRSI)-Mem. No: LMB 2335

Honors and award

	Name of Award	Awarding Agency	Year

S. No.			
1	Proficiency Award in B. Sc. (Physics) for the Ist Rank	Vivekanada College, Tiruvedakam, Madurai, M.K.University, Madurai.	1997
2	Temperature Dependent Properties of Ceria Thin films Prepared by Pulsed Laser Deposition Best Paper Award	International Symposium for Research Scholars, on Metallurgy, Materials science &Engineering (ISRS-2008), held at IIT madras, Chennai, India Dec, 2008	2008
3	X-Ray Reflectivity and Optical Studies of Ceria/Zirconia Mutilayer Films Deposited by Pulsed Laser Ablation Best Paper Award	International conference on surface modification technology (SMT-2009), organized by Indira Gandhi Centre For Atomic Research, Kalpakkam and Indian Institute of Metals, Kalpakkam, India. November 2 - 5, 2009.	2009
4	HRTEM Investigation of Phase Stability in Alumina-Zirconia Multilayers. Best Paper Award	International Symposium on Emerging Challenges for Metals and Materials: Nov 14-17, 2009, organized The Indian Institute of Metals, Kharagpur, Besu and Kolkata Chapters, India.	2009
5	HRTEM Characterization of Ceria/Zirconia Multilayers Prepared by Pulsed Laser Deposition. Best Paper Award.	Theme Symposium on Advanced Ceramic Materials -21 st Annual General Meeting of materials research society of india, Feb, 9-11, 2010 organized by materials research society of india (Gujarat Chapter & Department of Materials science Sardar Patel University, Gujarat, India	2010
6	HRTEM Characterisation of the Interfaces in Oxide multilayers, Best Presentation Award.	48th National Metallurgist Day (NMD) and the 64th Annual Technical Meeting (ATM)	2010
7	A Study of Phase Stability in Oxide Multi-layers at STEM 2010 Best poster award.	IGCAR, Kalpakkam	2010
8	Effect of Bias voltage on Microstructure and Properties of Diamond-like carbon (DLC) Coatings Prepared by Filtered Cathodic Vacuum Arc-Best Presentation Award	International Conference on Energy Materials (ICEM 2014) held in Sathyabama University, Chennai, India, July 28-30, 2014.	2014
9	Study of Microstructural and Properties of Nanostructured TiN thin	International Symposium on Recent Advances in Nanomaterials *& Workshop on* Modeling and Simulations of	2017

	films prepared by RF magnetron sputtering. Best Poster Award	Nanomaterials using VASP and Synthesis and Characterization of Nanomaterials*" on* 20-21st February, 2017 at Hindustan University, Chennai, India.	

Service activities (within and outside of the institution)

Helping to the research activities for the students

List of Publications

Sl. No	Title of the published papers	Authors' Name	Name of the Journal	Volume/ Page No. / Year	Impact factor
1	Influence of Background Gas Atmosphere on the Formation of Cr_2O_3Thin Films Prepared by Pulsed Laser Deposition.	G. Balakrishnan, P. Kuppusami, T. N. Sairam, R. V. Subba Rao, E. Mohandas and D. Sastikumar	Surface Engineering	25/223-227/2009	1.5
2	Synthesis and Properties of Ceria Thin films Prepared by Pulsed Laser Deposition	G. Balakrishnan, P. Kuppusami, T.N. Sairam, R. Thirumurugesan, E. Mohandas, D. Sastikumar	Journal of Nanoscience & Nanotechnol.	9/5421-5424/2009	1.15
3	Structural and Optical Properties of γ-Alumina Thin Films Prepared by Pulsed Laser Deposition.	G. Balakrishnan, P. Kuppusami, S. Tripura Sundari, R. Thirumurugesan, V. Ganesan, E. Mohandas and D. Sastikumar	Thin Solid Films	518/3898-3902/2010	1.888
4	A Study of microstructural and optical properties of nanocrystalline ceria thin films prepared by pulsed laser deposition.	G. Balakrishnan, S. Tripura Sundari, P. Kuppusami, P. Chandra Mohan, M.P. Srinivasan, E. Mohandas, V. Ganesan and D. Sastikumar	Thin Solid films	519/ 2520-2526/2011	1.888
5	Thermal stability of CeO_2/ZrO_2 Multilayer thin films prepared by pulsed laser deposition	G. Balakrishnan, P. Kuppusami, S. Murugesan, Chanchal Ghosh, Divakar Ramachandran, E.	Transactions of The Indian Institute of Metals	64 (3)/297-299/2011	0.215

		Mohandas , D. Sastikumar			
6	Influence of oxygen partial pressure on the properties of pulsed laser deposited nanocrystalline zirconia thin films	G. Balakrishnan, T. N.Sairam ,P. Kuppusami, R. Thirumurugesan, E. Mohandas, V. Ganesan and D. Sastikumar	Applied Surface Science	257/8506-8510/2011	2.099
7	High temperature x-ray diffraction studies of zirconia thin films prepared by reactive pulsed laser deposition	G. Balakrishnan, P. Kuppusami, S. Murugesan, E. Mohandas, D. Sastikumar	Crystal Research Technology	47(4)/ 415-422/ 2012	1.12
8	Characterization of Al_2O_3 / ZrO_2 Nano Multilayer Thin Films Prepared by Pulsed Laser Deposition.	G. Balakrishnan, P. Kuppusami, S. Murugesan, C. Ghosh; R. Divakar, E. Mohandas and D. Sastikumar	Materials Chemistry and Physics	133/299-303/2012	2.395
9	Microstructural and optical Properties of Nanocrystalline undoped Zirconia Thin Films Prepared by Pulsed Laser Deposition	G. Balakrishnan, K. Thanigaiarul, P. Sudhakara and Jung Il Song	Applied Physics A: Materials science & Processing	110/427-432/2012	1.545
10	Growth of Nanolaminate Structure of Tetragonal Zirconia by Pulsed Laser Deposition	G. Balakrishnan, P.Kuppusami, D. Sastikumar and Jung Il Song	Nanoscale Research Letters	8/1-7/2013	2.52
11	Microstructure and optical Properties of Al_2O_3/ZrO_2 nano multi-layer thinfilms prepared by pulsed laser deposition	G. Balakrishnan, T.N. Sairam, V.R. Reddy, P. Kuppusami, Jung Il Song	Materials Chemistry and Physics	140/60-65/2013	2.395
12	X-ray diffraction, Raman and Photoluminescence Studies of Nanocrystalline Cerium Oxide Thin Films	G. Balakrishnan, C.M. Raghavan, C. Ghosh, R. Divakar, E. Mohandas, Jung Il Song, S.I. Bae, T.G. Kim	Ceramics International	39/8327-8333/2013	1.968
13	Effect of substrate	G. Balakrishnan, S. Tripura	Ceramics	39/9017-	1.968

	temperature on microstructure and optical properties of nanocrystalline Alumina thin films	Sundari, R. Ramaseshan, R. Thirumurugesan, E. Mohandas, D. Sastikumar, P. Kuppusami, T.G. Kim, Jung Il Song	International	9023/2013	
14	Study of Al_2O_3/ZrO_2 (5 nm/20 nm) Nanolaminate Composite	G. Balakrishnan, A. Wasy, Ha Sun Ho, P. Sudhakara, S.I. Bae and Song Jung Il	Composites Research	26(1)/60-65/ 2013	-
15	Epitaxial growth of cerium oxide thin films by pulsed laser deposition	G. Balakrishnan, P. Sudhakara, Abdul Wasy, Ha Sun Ho, K.S. Shin and Jung Il Song	Thin Solid Films	546/ 467-471/2013	1.888
16	Effect of Oxygen Partial Pressure on Microstructural and Optical Properties of Titanium Oxide Thin Films Prepared by Pulsed Laser Deposition	G. Balakrishnan, Vengala Rao Bandi, S.M. Rajeswari, N. Balamurugan, R. Venkatesh Babu and Jung Il Song	Materials Research Bulletin	48/4901-4906/2013	2.141
17	Fabrication of Borassus fruit lignocellulose fiber/PP composites and comparison with jute, sisal and coir fibers	P. Sudhakara, Dani. Jagadeesh,YiQi Wang, C. Venkata Prasad, A.P. Kamala Devi, G. Balakrishnan, B.S. Kim, J.I. Song	Carbohydrate Polymers	98/1002-1010/2013	3.942
18	Thermal Fatigue Behavior of Air-Plasma Sprayed Thermal Barrier Coating with Bond Coat Species in Cyclic Thermal Exposure	Zhe Lu, Sang-Won Myoung, Yeon-Gil Jung, Govindasamy Balakrishnan, Jeongseung Lee and Ungyu Paik	Materials	6/3387-3403/2013	2.338
19	Phase Transition and Thermal Expansion Studies of Alumina Thin Films Prepared by Reactive Pulsed Laser Deposition	G. Balakrishnan, R. Thirumurugesan, E. Mohandas, D. Sastikumar, P. Kuppusami and Jung Il Song	Journal of Nanoscience and Nanotechnology	14/1-6, 2014	1.15
20	Growth of highly oriented γ and α-Al_2O_3 Thin Films by Pulsed Laser Deposition	G. Balakrishnan, R. Venkatesh Babu, K.S. Shin and Jung Il Song	Optics and Laser Technology	56/317-321/2014	1.296

21	Argon plasma treatment on metal substrates and effects on diamond-like carbon (DLC) coating properties	Abdul Wasy, G. Balakrishnan, S. H. Lee, J. K. Kim, D. G. Kim, T. G. Kim, and J. I. Song	Crystal Research Technology	1–10 (2013)	1.12
22	Thickness dependent properties of diamond like carbon coatings by filtered cathodic vacuum arc deposition	A. Wasy, G. Balakrishnan, S. Lee, J.-K. Kim, T. G. Kim and J. I. Song	Surface Engineering	31/85-89/2015	1.5
23	Green synthesis of zinc oxysulfide quantum dots using aegle marmelos fruit extract and their cytotoxicity in HeLa cells	Kalavakunta Venkata Pavan Kumar, Oriparambil Sivaraman Nirmal Ghosh, G. Balakrishnan, P. Thirugnanasambantham, Santhosh Kumar Raghavan and Annamraju Kasi Viswanath	RSC Advances	2015, 5, 16815	3.7
24	HRTEM investigation of phase stability in alumina–zirconia multilayer thin films	Chanchal Ghosh, Divakar Ramachandran, G. Balakrishnan, P. Kuppusami and E. Mohandas	Bulletin of Materials Science	38/ 1–7/2015	1.0
25	Microstructure and Optical Properties of Nano Multilayers of CeO_2/ZrO_2 and Gd_2O_3/CeO_2 Prepared by PLD.	P. Kuppusami, G. Balakrishnan, and Maneesha Mishra	Journal of Nanoscience and Nanotechnology	16/1-11, 2016	1.15
26	Growth of boron doped diamond on graphene by MPE-CVD system	VanCao Nguyen, JongSeok Kim, G. Balakrishnan, JeongSeokNoh, HyeSung Kim, JinKon Kim, Hyun Cho, Hohwan Chun, Sungchul Shin, Tae Gyu Kim	Int. J. Chem. Sci. and research.	6/30-36, 2016	
27	Effect of Substrate Temperature on Microstructure and Optical Properties of Nanocrystalline Titania Thin films Prepared by Pulsed Laser	G. Balakrishnan, S. Manavalan, R. Venkatesh Babu, Jung il Song	Nanosystems: Physics,Chemistry, Mathematics	7/0-2, 2016	

	Deposition				
28	Microstructural and Tribological Studies of Al_2O_3/ZrO_2 Nano Multilayer Thin films Prepared by Pulsed laser deposition	Balakrishnan G, T. Elangovan T , Shin-Sung Yoo, Dae-Eun- Kim, Kuppusami P, Venkatesh Babu R, Sastikumar D and Jung il Song	Adv. Mater. Lett.	Accepted	1.46
29	Deposition and Characterization of Diamond-like carbon (DLC) Thin Films	G. Balakrishnan, R. Venkatesh babu, Shivaraman R, Manavalan S Jung il Song	Carbon science and Technology	Accepted	0.74

Recent professional development activities

working on metal nitride based hard coatings for tribological applications