

Name

Dr. D. Siva Prakasham

Designation

Scientist

Qualification

B.E., M.Tech, Ph. D.

**Experience**

1996 – 2000	Assistant Engineer, BEML, KGF
2005 – 2011	Ph.D. IISc, Bangalore

Research areas of interest

Nanomaterials synthesis, characterization, consolidation, structure- properties correlation. XPS, SPS processing, Thermoelectric materials and device fabrication.

List of journal publications

1. "Mechanical Alloyed Fe-SiC Powder for Detonation Spray Coating",
D.Sivaprahasam, G.Sivakumar, R.Vijay, R.Sundaresan, *Proceedings of International Conference on Trends in Mechanical Alloying; Science, Technology and Applications*, Edited by P.Soni and T.V.Rajan. (2001) 84
2. " The Origin of High Green Strength in Warm Compaction"
V.C.Sajeev, D.Sivaprahasam, A.Sivakumar, R.Sundaresan, Edited by Prof.Dr..T.R.R. Mohan and Prof.Dr.P.Ramakrishnan. *Proceedings of International Conference on Automotive PM Components*, Oxford and IBH publications, (2002) 143

3. "Microstructure and mechanical properties of nanocrystalline WC-12Co consolidated by spark plasma sintering"
D.Sivaprahasam, S.B.Chandrasekar, R.Sundaresan, *Int. J Ref. Met. & Hard Mater.* 25 (2007) 144
4. "Microstructure, magnetic and Mossbauer studies on spark-plasma sintered Sm-Co-Fe/Fe(Co) nanocomposite magnets"
N V Rama Rao, P Saravanan, R Gopalan, M Manivel Raja, D V Sreedhara Rao, D Sivaprahasam, R Ranganathan and V Chandrasekaran, *J. Phys. D: Appl. Phys.* 41(2008) 065001(7pp)
5. "Effect of sintering temperature on the structure and magnetic properties of SmCo₅/Fe nanocomposite prepared by SPS"
P.Saravanan, R.Gopalan, D.Sivaprahasam, V.Chandrasekaran, *Intermetallics*, 17 (2009) 517-522.
6. " Microwave sintering of nanocrystalline WC-12Co: Challenges and Perspectives"
B.Sunil, D.Sivaprahasam, R.Subasri, *Int. J Ref. Met. & Hard Mater.* 28, (2010) 180-186
7. "Microstructure and mechanical properties of nanocrystalline highstrength Al-Mg-Si (AA6061) alloy by high energy ball milling and spark plasma sintering"
Jatinkumar Rana, D.Sivaprahasam, K.Seetharamaraju, V.Subramaniya Sarma, *Mat. Sci. & Engg. A* 527, (2009) 292-296
8. "Synthesis of FeCu nanopowder by levitational gas condensation process"
D.Sivaprahasam, A.M.Sriramamurthy, M.Vijayakumar, G.Sundararajan, K.Chattopadhyay, *Met. & Mater. Trans. B*, 41, (2010) 841-856
9. "Consolidation of FePd nanoparticles by spark plasma sintering"
P.Saravanan, K.S.Rao, D.Sivaprahasam, V.Chandrasekaran, *Intermetallics*, 18 (2010)2262-2265
10. "Development of Ni-Al₂O₃ in-situ nanocomposite by reactive milling and spark plasma sintering"

V.Udayabanu, K.R.Ravi, K.Murugan, D.Sivaprahasam, B.S.Murthy, *Metall. & Mater. Trans. A*, 42 (2011) 2085-93

11. "Combustion Synthesis of Doped Nanocrystalline ZnO Powders for varistors Applications"
K. Hembram, D. Sivaprahasam and T. N. Rao, , *J Euro. Ceram. Soc.* 31(2011)1905-1913.
12. "Effect of Cu on sintering behavior of Fe nanopowder"
D.Sivaprahasam, A.M.Sriramamurthy, S.Bysak, G.Sundararajan, K.Chattopadhyay
Metallurgical and Materials Transaction A –Under review
13. "Nanocrystalline Fe-Co-Sb thermoelectric alloy powder by RF plasma technique"
D.Sivaprahasam, R.Gopalan, G.Sundararajan, *J of alloys and compounds*, - shortly to be submitted.

Conference proceedings

1. "Mechanical Alloyed Fe-SiC Powder for Detonation Spray Coating",
D.Sivaprahasam, G.Sivakumar, R.Vijay, R.Sundaresan, International Conference on Trend in Mechanical Alloying; Science, Technology and Applications, Jaipur, 2001.
2. "The origin of High Green Strength in Warm Compaction
V.C.Sajeev, D.Sivaprahasam, A.Sivakumar, R.Sundaresan, presented in International Conference on PM Automotive Components, Delhi, 2002
3. "Synthesis of beta-AlLi by Mechanical Alloying for Thermal Batteries Application"
D.Sivaprahasam, T.V.L.Narashima Rao, R.Sundaresan, presentd at PMAI conference Goa. Jan 30-31 2003
4. "Effect of Powder Size Distribution on Pore Characteristics and Permeability in Loose Sintered Copper Powder"

D.Sivaprahasam, S.Sudhakar Sharma, R.Sunderesan, , presented at PMAI Conference Goa. Jan 30-31 2003

5. "Synthesis and Consolidation of Nanocrystalline TiC-MO₂C-Ni-Mo Composites through Reactive Mechanical Alloying"
S.B.Chandrasekhar, D.Sivaprahasam, R.Sundaresan, , presented at 30 th annual meeting of PMAI Kolkata. Jan 21-22, 2004.
6. "A Comparison of Structure and Properties of Ultrafine WC-12Co fabricated by Spark Plasma Sintered and Liquid Phase Sintered WC-12CO"
D.Sivaprahasam, S.B.Chandrasekhar, R.Sundaresan, presented at 31 st annual technical meeting of PMAI, Mumbai.Feb 3-6, 2005
7. "Consolidation of nano copper powder by spark plasam sintering and conventinal pressureless sintering"
D.Sivaprahasam, D.Chakravarthy, R.Sundaresan, presented at 33 rd annual technical meeting of PMAI, Noida, Feb 09-11, 2007
8. "Influence of sintering method on microstructure and mechnical properties of nanocrystalline WC-12Co"
D.Sivaprahasam, B.R.Sunil, R.Subasri, T.N.Rao, poster presentation in ICONSAT 2008 conference, Chennai, INDIA, February 27-28, 2008
9. "Synthesis of FeCu nanopowder by levitational gas condensation process"
D.Sivaprahasam, A.M.Sriramamurthy, M.Vijayakumar, G.Sundararajan, K.Chattopadhyay, Euromet 2009, Glasgow, U.K. Sept. 07-10, 2009.
10. "Effect of surface segregation on sintering behavior of Fe-X (X-Cu and Co) nano alloys"
D.Sivaprahasam, A.M.Sriramamurthy, G.Sundararajan, K.Chattopadhyay, ICONSAT, Hyderabad, Jan. 20-23, 2012.

List of patents

1. K. Hembram, D. Sivaprahasam and T. N. Rao, “ Improved Method for Producing ZnO Nanorods”, Indian Patent file no. 2759/DEL/2010

Affiliation to Professional Societies

1. Life Member of Powder Metallurgical Association of India.
2. Life Member of Indian Institute of Metals (IIM).

Awards and honors

1st prize in Electron Microscopy Conference (EMSI-2011) held at HYDERABAD for best SEM investigation.

Contact information

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