

1. Scientist/Officers biodata

- a. Name: Dr. S.B. Chandrasekhar
- b. Qualification: B.E. (NIT, Trichy) and Ph.D. (IIT Bombay)
- c. Designation: Scientist “F”
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Centre: Centre for Nanomaterials
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Mail ID: chandru@arci.res.in
- e. Experience
 1. Scientist – ARCI (1999–till date)
 2. Graduate Engineer Trainee (1998–1999), Nagarjuna Fertilizers and Chemicals Limited, Kakinada, A.P.
- f. Research areas of interest:

Tungsten heavy alloys, cemented carbides, metal matrix composites, inert gas atomization and oxide dispersion strengthened steels.
- g. List of journal publications
 1. S. Ganesh, P. Sai Karthik, M. Ramakrishna, A.V. Reddy, **S.B. Chandrasekhar**, R. Vijay, “Ultra-high strength oxide dispersion strengthened austenitic steel”, Mater. Sci. Eng. A 814 (2021) 141192.
 2. R. Vignesh Kumar, R. Harichandran, U. Vignesh, M. Thangavel, **S.B. Chandrasekhar**, “Influence of hot extrusion on strain hardening behavior of graphene platelets dispersed aluminium composites”, J. Alloys Compd. 855 (2021) 157448.
 3. P.V. Durga, K. Satya Prasad, **S.B. Chandrasekhar**, A.V. Reddy, S.R. Bakshi, R. Vijay, “Microstructural and mechanical properties of oxide dispersion strengthened iron aluminides produced by mechanical milling and hot extrusion”, J. Alloys Compd. 834 (2020) 155218.
 4. B. Prasanth, B. Jayachandren, Neha Hebalkar, R. Gopalan, **S.B. Chandrasekhar**, D. Sivaprahasam, “Improved thermal stability of thermoelectric $\text{Mg}_2\text{Si}_{0.4}\text{Sn}_{0.6}$ ”, Mater. Lett. 276 (2020) 128204.

5. N.S. Anas, **S.B. Chandrasekhar**, R.K. Dash, Tata N. Rao, R. Vijay, “Effect of carbon nanotubes on solution treatment temperature and dissolution characteristics of precipitates in Al alloy produced by high–energy milling and hot extrusion”, *Trans. Indian Inst. Met.* 72(10) (2019) 2687–2697.
6. V. Krishna, R. Padmapreetha, **S.B. Chandrasekhar**, K. Murugan, R. Johnson, “Oxidation resistant $\text{TiO}_2\text{–SiO}_2$ coatings on mild steel by sol–gel”, *Surf. Coat. Technol.* 378 (2019) 125041.
7. D. Sivaprahasam, **S.B. Chandrasekhar**, S. Kashyap, R. Gopalan, “Thermal conductivity of nanostructured $\text{Fe}_{0.04}\text{Co}_{0.96}\text{Sb}_3$ skutterudite”, *Mater. Lett.* 252 (2019) 231–234.
8. D. Sivaprahasam, **S.B. Chandrasekhar**, K. Murugan, K.V.P. Prabhakar, “Microstructure and mechanical properties of M62 high–speed steel powder consolidated by high–temperature gas extrusion”, *Mater. Res. Innov.* DOI: 10.1080/14328917.2019.1580889.
9. P. Sai Karthik, **S.B. Chandrasekhar**, D. Chakravarty, P.V.V. Srinivas, V.S.K. Chakravadhanula, T.N. Rao, “Propellant grade ultrafine aluminum powder by RF induction plasma”, *Adv. Powder Technol.* 29 (2018) 804–812.
10. **S.B. Chandrasekhar**, N.P. Wasekar, M. Ramakrishna, P. Suresh Babu, T.N. Rao, B.P. Kashyap, “Dynamic strain ageing in fine grained Cu–1 wt% Al_2O_3 composite processed by two step ball milling and spark plasma sintering”, *J. Alloys Compd.* 656 (2016) 423–430.
11. Sambaraj Sravan Kumara, Sandeep E S, **S.B. Chandrasekhar**, Swapan Kumar Karak, “Development of nano–oxide dispersed 304L steels by mechanical milling and conventional sintering”, *Mater. Res.* 19(1) (2016) 175–182.
12. **S.B. Chandrasekhar**, S. Sudhakara Sarma, M. Ramakrishna, P. Suresh Babu, Tata N. Rao and B.P. Kashyap, “Microstructure and properties of hot extruded Cu–1 wt.% Al_2O_3 nano composites synthesized by various techniques”, *Mater. Sci. Eng. A* 591 (2014) 46–53.
13. Sanjay R. Dhage, P.S. Chandrasekhar, **S.B. Chandrasekhar**, Shrikant V. Joshi, “CIGS absorber layer by single–step non–vacuum intense pulsed light treatment of inkjet–printed film”, *IEEE Proceedings* (2014)1607–1610.
14. **S.B. Chandrasekhar**, D. Prabhu, M. Gopinath, V. Chandrasekaran, M. Ramakrishna, V. Uma, R. Gopalan, “High saturation magnetization in Fe–0.4 wt. %P alloy processed by a two–step heat treatment”, *J. Magn. Mater.* 345 (2013) 239–242.

15. S. Mahendra Kumar, K. Murugan, **S.B. Chandrasekhar**, Neha Hebalkar, M. Krishna, B.S. Satyanarayana, Giridhar Madras, "Synthesis and characterization of nano silicon and titanium nitride powders using atmospheric microwave plasma technique", *J. Chem. Sci.* 124 (2012) 557–563.
16. K. Murugan, **S.B. Chandrasekhar**, J. Joardar, "Nanostructured α/β -tungsten by reduction of WO_3 under microwave plasma", *Int. J. Refract. Met. Hard Mater.* 29 (2011) 128–133.
17. D. Chakravarty, B.V.Sarada, **S.B. Chandrasekhar**, K.Saravanan, T.N.Rao, "A novel method of fabricating porous silicon", *Mater. Sci. Eng. A* 528 (2011) 7831–7834.
18. R. Mariappan, S. Kumaran, T. Srinivasa Rao, **S.B. Chandrasekhar**, "Microstructure and mechanical properties of duplex stainless steels sintered in different atmospheres", *Powder Metall.* 54 (2011) 236–241.
19. D. Sivaprahasam, **S.B. Chandrasekhar**, R. Sundaresan, "Microstructure and mechanical properties of nanocrystalline WC–12Co consolidated by spark plasma sintering", *Intl. J. Refract. Met. Hard Mater.* 25 (2007) 144–152.
20. G.V.S. Rao, M.H. Rao, **S.B. Chandrasekhar**, R. Sundaresan, "Influence of hot dip galvanizing on corrosion protection of sintered ferrous components", *Trans. Indian Inst. Met.* 59 (2006) 423–429.
21. **S.B. Chandrasekhar**, V.A. Mahendar, A.S. Kumar, R. Sundaresan, "Effect of atmosphere in the sintering of heavy alloys", *Adv. Powder Metall. Part. Mater.* 13 (2002) 201–210.

Conference Presentations:

1. **S.B. Chandrasekhar**, S. Sudhakar Sharma, S. Shanthanu Madge, T. Narasinga Rao, "Synthesis and consolidation of Cu– Al_2O_3 nano composite powders", PMAI 2008, Chennai.
2. **S.B. Chandrasekhar**, D. Sen, G. Siva Kumar, R. Sundaresan, "Development of nano WC–12Co powders by mechanical milling and its coating characteristics", PMAI 2007, Noida.
3. **S. B. Chandrasekhar**, N. Girish, A. Siva Kumar, and R. Sundaresan, "Development of binder treated ferrous based powders", PMAI 2003, Goa.

4. **S.B. Chandrasekhar**, A. Shiv Kumar, R. Sundaresan, "Improved sintering of WC–6%Co system by the addition of nano sized nickel particles", PMAI–2001, Jaipur.
5. K. Malobika, **S.B. Chandrasekhar**, A. Shiv Kumar, R. Sundaresan, "Sintering studies on iron powders produced from hematite and magnetite", PMAI–2000, Chennai.

h. List of Patents: Nil

i. Conference proceedings:

1. R. Naresh Kumar, Balaji Padya, **S.B. Chandrasekhar**, P.K. Jain, V.V.S.S. Srikanth, K. Bhanu Sankara Rao, "Morphological, structural and phase characteristics of conventionally sintered MWCNTs/Cu composite", Proceeding of the "International conference on advanced nanomaterials & emerging engineering technologies" (ICANMEET–2013).
2. R. Mariappan, S. Kennady, **S.B. Chandrasekhar**, S. Kumaran, T. Srinivasa Rao, "Studies on microstructure and mechanical properties of vacuum sintered stainless steels", Transactions of PMAI 2009.

j. Contribution to Books: Nil

k. Affiliation to Professional societies:

Powder Metallurgical Association of India (PMAI)
Materials Research Society of India (MRSI)
Magnetics Society of India (MSI)

l. Awards & Honors: Nil

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