As on Aug 15, 2019

Brief Resume of Prof. B.S. Murty

1. **Name & Designation**: Dr. B.S. Murty, *FNAE, FNA, FASc, FNASc, FTWAS, FASM, FAPAM, FIIM, FAPAS*
   Professor, Dept. of Metallurgical and Materials Engineering
   Institute Professor and Girija & R. Muralidharan Chair Professor
   Head, Deakin-IITM Centre of Excellence on Advanced Materials & Manufacturing
   Professor-in-Charge, MHRD Centre for Nanotechnology
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2. **Academic Background**: BE: 1986 (VRCE Nagpur); ME: 1988; PhD: 1992 (IISc Bangalore)

3. **Professional Experience**: (Date of Birth: Feb 13, 1964)
   Visiting Lecturer, IIT Kharagpur (1992-1995); Assistant Professor, IIT Kharagpur (1995-1999);
   Associate Professor, IIT Kharagpur (1999-2003); Professor, IIT Kharagpur (2003-2004)
   Professor, IIT Madras (2004-2012); Professor, HAG, IIT Madras (since 2012);
   Head of the Department of Metallurgical and Materials Engineering (Sept 2015-Jan 2018)

4. **Fields of Specialization**: High entropy alloys, Nanocrystalline materials, bulk metallic glasses, grain refinement and modification of Al alloys and composites, in-situ composites, non-equilibrium processing, particulate technologies, transmission electron microscopy, atom probe tomography.

5. **Research Guidance**: PhD: Completed – 39, Ongoing – 20; MS: Completed – 7, Ongoing – 1;
   MTech: Completed – 44; Ongoing – 2; BTech: Completed – 43

6. **Sponsored Projects/Patents**: Completed: 55 (Rs. 18.72 Crores); Ongoing: 13 (Rs. 51.72 Crores); (Sponsoring Agencies: SERB, DST, Nano Mission, MHRD, CSIR, DRDO, NRB, ARDB, PSA, BRNS, ISRO, DAAD, ARCI, BHEL, GM, GE, Vizag Steel, Tata Steel, Titan, L&T, IREL); Patents filed: 20

7. **Publications**:
   Journal Publications – 402; Conference Proceedings – 53; Books - 4; Book Chapters – 3
   Citations: Scopus: 386, h-Index-49, Citations-9906, i10-209;
   Google Scholar**:** h-Index-57, Citations-13070, i10-241)

8. **Membership of Academic bodies**: IIM, MRSI, ISCA, MSI, PMAI, EMSI, ASM International, JIM

9. **Selected Awards and Honors**:

   International Awards/Honors:
   - Honorary Doctorate of Deakin University, Melbourne, Australia (2017)
   - Fellow of The World Academy of Sciences (FTWAS, 2018), Fellow of Asia Pacific Academy of Materials (FAPAM, 2013), Fellow of ASM International (FASM, 2010)
   - Associate Faculty, Univ. of British Columbia, Canada (2016-2019)
   - Adjunct Professor, Ryerson University, Toronto, Canada (2011-2014, 2014-2017)
   - Member, Nominating Committee, ASM Intl. (2017), ASM-IIM North America Lectureship Award (2014)
   - Member, International Advisory Committee, Rapidly Quenched Metals (2008-2017, 2017-2026)
   - Member, ISMANAM Steering Committee
   - Member, Adjudication Committee of Shastri Foundation, Canada (2014, 2015, 2017)
   - Key Reader, Metallurgical and Materials Transactions (since 2001)

   National Awards/Honors:
   - Shanti Swarup Bhatnagar Award (2007), JC Bose Fellowship Award (2018-2023)
   - Fellow of AP Academy of Sciences (FAPAS, 2016), Indian Inst. of Metals (FIIM, 2015), Indian National Science Academy (FNA, 2013), Indian Academy of Sciences (FASc, 2008), National Academy of Sciences (FNASc, 2008), Indian National Academy of Engineering (FNAE, 2007)
   - Lifetime Achievement Award, IIT Madras (2016) Distinguished Alumnus Award, VNIT Nagpur (2010)
   - INAE Outstanding Teacher Award (2019), Roddam Narasimha Distinguished Lecture, IITGN (2018), AK Seal Memorial Lecture (2017), GD Birla Gold Medal of Indian Institute of Metals (2015), Prof. Rodriguez Memorial Lecture Award (2012)
   - Eminent Materials Engineer Award by Institute of Engineers (2011), Metallurgist of the Year Award

(2004), MRSI Gold Medal (2004), INAE Young Engineer Award (1997), INSA Young Scientist Award (1995), Young Metallurgist Award (1994), ISCA Young Scientist Award (1992)

- Chief Editor, Trans. IIM (since 2017), Head, Materials Panel, Naval Res. Board (2008-2009,2012-2016)
- Member, Research Council, DMRL, Hyderabad (2017-2020); AMPRI-CSIR, Bhopal (2010-2013,2013-2016); IICT-CSIR, Hyderabad (2010-2013)
- Sectional President, Materials Science Section, Indian Science Congress (2012)
- Member, INAE Governing Council (2016-2019); Coordinator, AICTE-INAE Travel Grant Scheme for Eng. Students (since 2013); Member, INSA Sectional Committee, (2015-2018); Member, IASc Sectional Committee (2016-2019); Member, SERB Expert Committee for Young Scientists in Engineering Sciences (2015-2018); Member, PAC on Materials, Mining and Minerals, DST, Govt. of India (2004-2011; 2015-2018, 2018-2021); Member, Mater. and Eng. PAC of International Bilateral Cooperation Division, DST (2018-2021); Member, SJF Award Committee for Engineering Sciences of DST (2017,2018); Co-Chairman, DRDO Recruitment & Assessment Board (since 2019); Member Board Governors, NIFFT Ranchi; Visitor's Nominee, NITs.

10. **Main research contributions:**
    - He has pioneered the field of non-equilibrium processing of materials by mechanical alloying. He has not only developed advanced materials using this route, but also has made key contributions to the development of theoretical frame work in this field.
    - He has developed a wide variety of nano materials with exceptional structural and functional properties and demonstrated their technological viability.
    - He has also pioneered the field of high entropy alloys from India, which are exciting new class of materials with immense application potential.
    - He has made significant contributions to the field of bulk metallic glasses including developing thermodynamic models for predicting glass forming ability.
    - His group is the first in India to successfully develop a technology for the production grain refiners for Aluminium and demonstrate their superiority over the imported ones.

11. **Contributions to Teaching and Research Community/Leadership Qualities:**
    - His NPTEL courses are among the most popular ones with large number of viewers.
    - He has established National Facility for Atom Probe Tomography at IIT Madras with a remotely operable Local Electrode Atom Probe (LEAP) (https://nfapt.iitm.ac.in/) (first such facility globally) to characterize materials in 3D at the atomic scale. This facility is run in 3 shifts daily on a 24 x 7 basis.
    - He is a pioneer in the field of high entropy alloys (HEAs) from India, which has attracted a number of groups working in this field. His group has been maintaining a website (www.mme.iitm.ac.in/hea) for the benefit of researchers in this field, which brings out all the research activities in this field every corner of India and also the latest global publications in this field.
    - He has set up Deakin-IITM Centre of Excellence for Advanced Materials and Manufacturing in collaboration with Deakin University, Australia (https://deakiniitmcoe.iitm.ac.in/).
    - He has been responsible for several MOUs of IITM with various overseas universities such as Deakin University, Swinburne University, Australia, Ryerson University, Canada, RWTH Aachen, NTHU, Taiwan, University of Bradford, UK.
    - He has also been successful in bringing one of the most popular conferences in his field "International Symposium of Metastable, Amorphous and Nanocrystalline Materials (ISMANAM)" to India, the 26th symposium in this series which will be organized in July 2019 in Chennai under his Chairmanship.
    - As a research scholar at IISc Bangalore, he initiated an annual symposium of research scholars in 1989, which has now completed 30 years successfully.
    - At IIT Kharagpur, he (together with Prof. I. Manna) initiated an annual student in 1994, COMPOSIT, which is regularly being organized for the past 25 years.
    - International Symposium of Research Scholars in Metallurgy and Materials Engineering (ISRS), a biennial symposium has been initiated by Prof. Murty at IIT Madras in 2004.
    - He motivated students at IITM to start Etch, a half-yearly magazine of the MME department.
    - In order to train students on sophisticated facilities, he initiated a course on "Practical Transmission Electron Microscopy" at IITM, which has helped a large number of research scholars.
    - He has been the main pillar in the International Conference on Solidification science and Processing (ICSSP) series which is being organized very successfully once in three years since 2001.