RESUME OF PROF. M. K. SURAPPA

Name : **Dr. M. K. SURAPPA**

Date of Birth : **5th December 1951**

Designation : **INSA Senior Scientist**
National Institute for Advanced Studies, Bangalore
Distinguished Honorary Professor for Life
University of Mysore
Formerly, Vice-Chancellor
Anna University Chennai
Formerly Professor and Dean Faculty of Engineering
Indian Institute of Science
Formerly Director
Indian Institute of Technology, Ropar
and Formerly Honorary Secretary
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Educational Qualifications :

Degree	Institution	Fields	Year
B.Sc.	University of Mysore	Science	1970
B.E.	Indian Institute of Science	Metallurgy	1973
M.Sc (Engg)	Indian Institute of Science	Metallurgy	1976
Ph.D.	Indian Institute of Science	Metallurgy	1980

Fellowship of Academies: Fellow, Indian National Science Academy
Fellow, Indian National Academy of Engineering

Executive Programme on Leadership at Harvard University (November 2006)

Completed one-week Executive Education on "Science, Technology and Innovation Policy" at John F. Kennedy School of Government, Harvard University, USA. Other participants of this unique program included Senior Civil Servants, University Presidents and Senior Advisors to Heads of State and Government from developing countries.

Details of service:

May 1979 - Oct. 1981	**:**	Scientist Regional Research Laboratory Trivandrum – 695019 Kerala, **INDIA**
March 1987 - Feb. 1993	**:**	Assistant Professor
March 1993 - Feb. 1998	**:**	Associate Professor
March 1998 - Present	**:**	Professor Department of Materials Engineering Indian Institute of Science Bangalore 560 012, **INDIA**

Assignments abroad:

Oct 1981 to Aug. 1983	**:**	Research Associate Department of Materials Engineering Drexel University Philadelphia, PA 19101, **U.S.A**.
Oct 1983 - Nov. 1984	**:**	Research Fellow Cavendish Laboratory University of Cambridge Cambridge, **U.K.**
Nov. 1984 - March 1987	**:**	Research Engineer Department of Materials Swiss Federal Institute of Technology Lausanne, **SWITZERLAND**
Dec. 1988 - June 1989	**:**	Visiting Professor Department of Mechanical Engineering Hiroshima University, **JAPAN**
June 1996-July 1996	**:**	Visiting Fellow Department of Materials Engineering University of Surrey, **U.K.**
May 1997 - June 1997	:	Visiting Professor Department of Mechanical Engineering Fukui University, Fukui, **JAPAN**
Nov.1998 - Dec.1998	**:**	Visiting Professor

		Department of Applied Physics University of Alicante, **SPAIN**
Oct. 1999-Nov. 1999	**:**	Visiting Fellow Department of Materials Science University of Ruhr-Bochum, **GERMANY**
Jan. 2000 - June 2000	**:**	Visiting Professor Department of Mechanical and Production Engineering National University of Singapore **SINGAPORE**
October 2008	:	Distinguished Visiting Scholar Center for Materials Processing and Tribology Purdue University, **U.S.A**
December 2009		Visiting Professor Lulea University of Technology, **SWEDEN**

Research interests : Materials Processing, Solidification Processing of Metal Matrix Composites, Fatigue and Tribology of MMCs.

Students Guided : Supervised 7 Ph.D. and 60 M.S. /M.E students.

Major R & D Projects executed : (Prof. M. K. Surappa as Principal Investigator)

1. Processing of Nano-particle dispersed Al MMCs (Nano MMCs) via melt route, Aluminium Company of America (ALCOA), USA, 2006-2010, (Rs. 75 Lakhs)

2. Friction and Wear Behaviour of Aluminium MMC Brake disc/ Brake pad during Sliding Wear, Department of Science and Technology, 2003-2006, (Rs. 17.55 Lakhs)

3. Studies on Friction and Wear Behaviour of Hypereutectic Al-Si alloys in Relation to Al MMCs, Hydro Aluminium - Norway, 2001-2002, (Rs. 10 Lakhs)

Membership of Professional Societies

Life member	**:**	Indian Institute of Metals Materials Research Society of India Indian Society for Advancement of Materials and Process Engineering Society for Scientific Values
Joint Treasurer	**:**	Materials Research Society of India (2005-2007)

Joint Secretary **:** Materials Research Society of India (2007-)

1). Societal responsibilities:

President: Bharath Gyan Vigyan Samithi, Karnataka, 2001- 2009

Member: Local Area Environment Committee constituted by the Supreme Court Monitoring Committee, Government of India (2007).

Member: Project Executive Committee, Biomass Energy for Rural India Project (2004-2009).

2). Administrative Responsibilities:

Chairman: Committee to Examine all issues relating to service matters of Employees of IISc belonging to B, C, D, Group (2008-2009)
Amenities and Facilities Committee (2002-2005)

Member: Interface Committee of the Institute (2008- 2009)
Committee to advise the Director on matters related to SC/ST students and Staff (2008- 2009)
Negotiations Committee (2004- 2009)
Counselling Committee (2004- 2009)
Complaints Committee (2003- 2009)

3). Editorial and Related Responsibilities:

a). Member

1) International Editorial Board of **Journal of Lubrication Science,** Published by Wiley Inter Science, United Kingdom.

2) International Editorial Advisory Board of **Journal of Japan Foundry Engineering Society**, Published by the Japan Foundry Engineering Society, Japan.

3) **Indian Co-ordinator** for Joint European Master Degree Programme in Advanced Materials Science and Engineering

b). Reviewer for

a) Tribology International – Elsevier Science, UK
b) Materials Science and Engineering A – Elsevier Science, UK.
c) Wear - Elsevier Science, UK.
d) Composites Science and Technology - Elsevier Science, UK.
e) Composites - Elsevier Science, UK.
f) Materials Research Bulletin - Pergamon Press, UK.
g) Bulletin of Materials Science - Indian Academy of Sciences.

h) Peer reviewer of papers presented at International conferences on Composite Materials (ICCM) and Wear of Materials (WOM).

i) Scripta Materialia – Elsevier Science, UK

j) Chemical Engineering Science – Elsevier Science, UK

k) Materials Chemistry and Physics – Elsevier Science, UK

4). Academic and Professional Responsibilities:

1). Independent Director on the Board of Director of Andhra Pradesh Med. Tech Zone Ltd. (AMTZ) 2016-

2). Member, Governing Council, Sardar Swaran Singh National Institute of Renewable Energy (SSS-NIRE), Kapurthala, Jalandhar (2014-2016)

3). Member, Board of Governors, Indian Institute of Science Education and Research(IISER) Mohali, Punjab, (2009-2012 and 2012-2015).

4). Member of Academic Senate, Indian Institute of Science Education and Research (IISER), Mohali, Punjab (2009-20012, 20012-20015, 2015-2018)

5). Member of the Court, Central University of Punjab, (2014-2016)

6). Member of the Court, Central University of Jammu, (2012-2015)

7). Member, Board of Governors, Punjab Technical University, Jalandhar, Punjab, (2009-2012 and 2012-2015)

8). Member, Board of Governors, Dr. B. R. Ambedkar National Institute of Technology (NIT), Jalandhar, Punjab (2014-2016)

9). Member, Board of Governors, National Institute of Technology (NIT), Kurukshetra, Haryana, (2012-2015)

10). Member, Sectional Committee, Indian National Science Academy, (2012-2015).

11). Member, Board of Governors, Thapar University, Patiala (2010-2013 and 2013-2016)

12). Member, Search Committee for Selection of Vice- Chancellor of Shivaji University

13). Member, Task Force on Development of Steel Sector, Government of Karnataka

14). Member, Academic Council, Defence Institute of Advanced Technology (DIAT), Pune

15). Member, Advisory Committee, IPR Cell of Info Dynamics, Trivandrum

16). Ph.D./ M. S./M.Phil thesis examiner for Indian Institutes of Technology, Kharagpur, Mumbai, Delhi, Chennai, and Roorkee, Universities of Kerala and Bangalore, National University of Singapore, Singapore. University of Malaysia, Malaysia, and Hong Kong Polytechnic University, Hong Kong.

5). Awards and Honors:

1. **Life-Long Distinguished Professor, University of Mysore (since 2021)**

2. **Lt.Col. S. Paul Memorial Endowement Lecture Award, Anna University, Chennai, Feb. 27, 2021**

3. **Distinguished Alumnus Award , University of Mysore 2020**

4. SIR M. VISVESWARAYA STATE AWARD FOR SENIOR SCIENTISTS for Life Time Contributions in Science and Technology, 2017, Govt. of Karnataka

5. Honorary Degree of Doctor of Literature (D.Lit) of Karnataka State Open University,2015
6. FELLOW, Indian National Science Academy
7. FELLOW, Indian National Academy of Engineering
8. Honorary Fellowship of Indian Society for Technical Education 2019
9. Prof. RUSTOM CHOKSI AWARD for Excellence in Research in Engineering for the year 2007 by the Indian Institute of Science.
10. SUVARNA KARNATAKA RAJYOTSAVA AWARD in the area of Science and Technology for the year 2006 by the Government of Karnataka.
11. Dr. Daya Swarup Memorial Lecture Award by the Indian Institute of Metals 2019.
12. Karnataka Convention Commemorative Lecture Award by the Indian Society for Technical Education 2019.
13. AMULYA-2012 Award by the Karnataka State Innovation Council, Govt. of Karnataka.
14. MRSI-ICSC Super Conductivity and Materials Science Annual Prize for the year 2007 by Materials Research Society of India.
15. Visiting Professor to the SIR M. VISVESWARAYA CHAIR, University of Mysore, 2003-2004.
16. METALLURGIST OF THE YEAR AWARD for the year 1998 by the Ministry of Mines and Steels (Govt. of India) and the Indian Institute of Metals.
17. MRSI MEDAL for the year 1997 by the Materials Research Society of India.
18. JSPS Invitation Fellowship (Senior), Japan (May – June, 1997).
19. JAWAHARLAL NEHRU MEMORIAL TRUST (UK) Scholarship (1983).

6). Symposium/Conference Organized :

1. One day symposium on "*Reactivity in Solids*" July 1994, IISc, Bangalore.
2. "*International Discussion Meeting on Inorganic Matrix Composites*" March 9-11, 1995, IISc, Bangalore.
3. Organizer and Session Chairman for "Composite Materials" for *International Conference on Advanced Materials (IUMRS-ICAM)* held in Bangalore during October 2007.

7). RESEARCH PUBLICATIONS OF PROF. M. K. SURAPPA

(A). Book Edited:

A book on ***"Inorganic Matrix Composites"*** edited by ***Prof. M. K. Surappa*** has been published by The Minerals, Metals & Materials Society of USA (1996)

(B). Patents:

1. US Patent with application No. 13/056503 on **"A process for preparation of nano ceramic- metal matrix composites and apparatus thereof"** has been granted on Sep. 24, 2013 vide **US Patent no. US 8,540,797 B2**
   Inventors: R. Raj, **M. K. Surappa** and Sudarshan.

2. An Indian patent (IP05198) on **"A process to prepare melt-ceramic nano-composites by cross-linking organic precursor, method and apparatus thereof"** has been filed (2007).

3. An Indian patent on **"Process for the fabrication of flyash reinforced composites"** has been granted (Patent No. 198342 (259) MAS/2003).

4. A patent on **"Process for the fabrication of Mg-30% SiC particle reinforced composites by casting route"** has been granted (Patent No. 196381 (932) MAS/1999).

(B). (1). Report to the Government:

Science and Technology Policy for the Karnataka State formulated by Expert Committee with Prof. U. R. Rao as Chairman and Prof. M. K. Surappa as Member-Secretary.

(C). Research Papers Published in Referred Journals

1. **Machavallavan, N.C., Raj Rishi, and M. K. SURAPPA (2020)**
   Solidification Processing of Magnesium based In-Situ Metal Matrix Composites by Precursor Approach
   Book Chapter in the Book on Magnesium Alloys Structures and Properties
   Published in November 2020, DOI 10.5772/Intechopen.94305

2. **Bhaskar, M.S**., and **M. K. SURAPPA (2019)**
   Effect of Recovery and Recrystallization on the Damping Behaviour of A356/SiC_p
   Transaction of the Indian Institute of Metals 72(4)pp. 849-857

3. **Chelliah, N.M., Padaikathan, P** and **M. K. SURAPPA (2019)**

Effects of processing conditions on solidification characteristics and mechanical properties of in situ magnesium metal matrix composites derived from polysilazane precursor
Journal of Composite Materials – Article in Press

4. **Chelliah, N.M., Padaikathan, P** and **M. K. SURAPPA (2018)**
   Deformation mechanisms and texture evolution of in-situ magnesium matrix composites containing polymer derived SICNO dispersoids during hot compression
   Materials Science and Engineering A720,pp 49-59

5. **Chelliah, N.M., Singh, H** and **M. K. SURAPPA (2017)**
   Microstructural evolution and strengthening behavior in in-situ magnesium matrix composites fabricated by solidification processing
   Materials Chemistry and Physics 194,pp 65-76

6. **Chelliah, N.M., Saxena, A., Sharma, K., Singh, H** and **M. K. SURAPPA (2017)**
   Surface characterization of nanoporous aluminum oxide films synthesized by single-step DC and AC anodization
   Surfaces and Interfaces 7, pp. 65-76

7. **Chelliah, N.M., Sudarshan, Kraemer, L.** and **M. K. SURAPPA (2017)**
   Stess-rupture measurements of cast magnesium strengthened by in-situ production of ceramic particles Open Access
   Journal of Magnesium and Alloys 5(2), pp. 225-230

8. CHELLIAH, N. M., SINGH, H, and **M. K. SURAPPA (2017)**
   Microstructural evolution and strengthening behavior in in-situ magnesium matrix composites fabricated by solidification processing
   Materials Chemistry and Physics V.194, P. 65

9. CHELLIAH, N. M., SAXENA, A, SHARMA, K, SINGH, H and **M. K. SURAPPA(2017)**
   Surface characterization of nanoporous aluminium oxide films synthesized by single-step DC and AC anodization
   Surfaces and Interfaces V.7, P. 139

10. CHELLIAH, N. M., SUDARSHAN, KRAEMER,L. SINGH, H and **M. K. SURAPPA**, RAJ, R **(2017)**

Stress–rupture measurements of cast magnesium strengthen production of ceramic particles
Journal of Magnesium and AlloysV.5(2),P.225

11. CHELLIAH, N. M., KUMAR, SINGH, H, and **M. K. SURAPPA (2017)**
Microstructural evolution of die-cast and homogenized AZ91 Mg-alloys during dry sliding condition
Journal of Magnesium Alloys, V.5(1), P. 35

12. CHELLIAH, N. M., SINGH, H, RISHI RAJ and **M. K. SURAPPA (2017)**
Processing, microstructural evolution and strength properties of in-situ magnesium matrix composites containing nan—sized polymer derived SiCNO particles
Materials Science and Engineering A Vol.685, P. 429

13. NAGARAJA M. CHELLIAH, HARPREET SINGH AND **M.K. SURAPPA (2016)**
Correlation between microstructure and wear behavior of AZX915 Mg alloy reinforced with 12wt% TiC particles by stir-casting process
Journal of Magnesium and Alloys,Vol. 4, p. 306

14. **M. K. SURAPPA (2016)**
World university rankings and subject ranking in engineering and technology (2015-2016): a case for greater transparency
Current Science, Vol.111, No.3, p.461-464

15. S. ROY, G. KANNAN, S. SUWAS and **M. K. SURAPPA** (2015)
EFFECT OF EXTRUSION RATIO ON THE MICROSTRUCTURE, TEXTURE AND MECHANICAL PROPERTIES OF $(Mg/AZ91)_m$-SiC_p Composite
Materials Science and Engineering A, Vol. 624, P. 279-290

16. M. K. SURAPPA (2013)
INDIA'S RANKING IN MATERIALS RESEARCH
Current Science, Vol.105, No. 2, 25 July 2013, P. 147-149

17. A. R. ANILCHANDRA AND **M. K. SURAPPA** (2013)
MICROSTRUCTURE AND TENSILE PROPERTIES OF CONSOLIDATED MAGNESIUM CHIPS
Materials Science and Engineering A, Vol. 560, P. 759-766

18. A. R. ANILCHANDRA AND **M. K. SURAPPA** (2012)
MICROSTRUCTURE AND DAMPING BEHAVIOUR OF CONSOLIDATED MAGNESIUM CHIPS
Materials Science and Engineering A, Vol. 542, P. 94-103

19. A. R. ANILCHANDRA, BASU RITWICK, SAMAJDAR, INDRADEV AND **M. K. SURAPPA** (2012)
MICROSTRUCTURE AND COMPRESSION BEHAVIOUR OF CHIP CONSOLIDATED MAGNESIUM
Journal of Materials Research, Vol.27, No.4, P. 709-719

*20. R.C. SHIVAMURTHY AND **M .K. SURAPPA** (2011)*
TRIBOLOGICAL CHARACTERISTICS OF A356 Al ALLOY-- SiCp COMPOSITE DISCS WEAR, Vol.271, P. 1946-1950

*21. ANIL CHANDRA A.R AND **M. K. SURAPPA** (2010)*
INFLUENCE OF TOOL RAKE ANGLE ON THE QUALITY OF CHIP CONSOLIDATED PRODUCT
Journal of Materials Processing Technology P. 423-428

22. *RANJIT BAURI AND **M .K. SURAPPA*** (2009)
PROCESSING AND COMPRESSIVE STRENGTH OF Al-Li-SiCp COMPOSITES FABRICATED BY A COMPOUND BILLET TECHNIQUE
Journal of Materials Processing Technology, Vol. 209, P. 2077-2084

23. *SUDARSHAN, **M. K. SURAPPA**, DONGJOON AHN, AND RISHI RAJ* (2008)
NANO-CERAMIC METAL MATRIX COMPOSITES BY IN-SITU PYROLYSIS OF ORGANIC PRECURSORS IN A LIQUID MELT
Metallurgical and Materials Transactions A, Vol. 39A, P. 3291- 3297

*24. SUDARSHAN AND **M. K. SURAPPA** (2008)*
SYNTHESIS OF FLY ASH PARTICLE REINFORCED A356 Al COMPOSITES AND THEIR CHARACTERIZATION
Materials Science and Engineering A, Vol. 480, P. 117-124

*25. RANJIT BAURI AND **M. K. SURAPPA** (2008)*
INTERFACIAL AND MATRIX MODULUS STUDIES BY DYNAMICS ULTRA MICRO HARDNESS (DUH) INDENTATION IN Al-Li-SiCp COMPOSITES
Journal of Mechanical Engineering and Materials Sciences, Vol. 1(1), P. 1-8

26. *RANJIT BAURI AND **M. K. SURAPPA*** (2008)
SLIDING WEAR BEHAVIOR OF Al-Li-SiCp COMPOSITES
Wear, Vol. 265, P. 1756-1766

27. *SUDARSHAN AND **M. K. SURAPPA*** (2008)
DRY SLIDING WEAR OF FLY ASH PARTICLE REINFORCED A356 Al COMPOSITES
Wear, Vol. 265, P. 349

28. *RANJIT BAURI AND **M. K. SURAPPA** (2007)*
PROCESSING AND PROPERTIES OF Al-Li-SiCP COMPOSITES
Science and Technology of Advanced Materials Vol. 8, P. 494-502

29. *TREJO E., E., GARCÍA-HINOJOSA, J.A., **SURAPPA, M.K.**, RODRÍGUEZ, E.* (2007)
THERMAL ANALYSIS AND MICROSTRUCTURE COMPARISON BETWEEN A356 ALUMINUM ALLOY AND A356/15VOL. % SiCp CAST COMPOSITE MODIFIED WITH STRONTIUM
Material Science Forum, Vol. 560, P. 47

30. ***M. K. SURAPPA,** R. K. UYYURU AND S.BRUSETHAUG* (2007)
TRIBOLOGICAL BEHAVIOR OF Al-SiC_p COMPOSITES / AUTOMOBILE BRAKE PAD SYSTEM UNDER DRY SLIDING CONDITIONS
Tribology International, Vol. 40, P. 365.

31. *S. KANNAN, H. A. KISHAWY, I. M. DEIAB AND **M. K. SURAPPA*** (2006)
ON THE ROLE OF REINFORCEMENT ON TOOL PERFORMANCE DURING CUTTING METAL MATRIX COMPOSITES
Journal of Manufacturing Processes, Vol. 8, P. 67

32. *K.B. KHAN, T.G.R. KUTTY, AND **M. K. SURAPPA*** (2006)
HOT HARDNESS AND INDENTATION CREEP STUDY ON Al-5%Mg ALLOY MATRIX – B_4C PARTICLE REINFORCED COMPOSITES
Materials Science and Engineering A, Vol. 427, P. 7

33. ***M. K. SURAPPA**, R. K. UYYURU AND S.BRUSETHAUG* (2006)
EFFECT OF REINFORCEMENT VOLUME FRACTION, AND SIZE DISTRIBUTION ON THE TRIBOLOGICAL BEHAVIOR OF Al-COMPOSITE / BRAKE PAD TRIBO COUPLE
Wear, Vol. 260, P. 1248

34. *RANJIT BAURI, V. PANCHOLI, I. SAMAJDAR AND **M. K. SURAPPA*** (2005)
RELATING MICROTEXTURE AND DYNAMIC MICRO HARDNESS IN AN EXTRUDED AA8090 ALLOY AND AA8090 - 8 VOL. % SiC_P COMPOSITE
Science and Technology of Advanced Materials, Vol. 6, P. 933

35. *RANJIT BAURI AND **M. K. SURAPPA*** (2005)
INVESTIGATIONS ON SERRATED FLOW IN 8090 Al ALLOY AND 8090 Al-SiC_P COMPOSITES OCCURING DURING ULTRA LOW LOAD MICRO HARDNESS (DUH) INDENTATION
Materials Science and Engineering A, Vol. 393, P. 22

36. *RANJIT BAURI AND **M. K. SURAPPA*** (2005)
DAMPING BEHAVIOR OF Al-Li-SiC_p COMPOSITES PROCESSED BY THE STIR CASTING TECHNIQUE
Metallurgical and Materials Transactions A, Vol. 36A, P. 667

37. *J. A. GARCIA, C. R. GONZALEZ, J.A. JUAREZ.I AND **M. K. SURAPPA*** (2004)
EFFECT OF GRAIN REFINEMENT TREATMENT ON THE MICROSTRUCTURE OF CAST Al-7Si-SiCp COMPOSITES
Materials Science and Engineering A, Vol. 386, P. 54

*38. J.A. GARCIA, C.R. GONZALEZ, J.A. JUAREZ AND **M. K. SURAPPA*** (2004)
EFFECT OF Sr ADDITION ON AN Al-7Si-10 VOL.% SiC_P CAST COMPOSITES
Materials Science and Engineering A, Vol. 382, P. 315

39. *K. UDAYA BHAT AND **M. K. SURAPPA*** (2004)
MICROSTRUCTURAL STUDIES IN LOW SPECIFIC ENERGY LASER SURFACE TREATED Al (A356) – SiC_P COMPOSITES
Journal of Materials Science, Vol.39, P. 2795

40. ***M. K. SURAPPA*** (2003)
METAL MATRIX COMPOSITES
in "Materials Research : Current scenario and Future Projections" Edited by R. Chidambaram and S. Banerji, Materials Research Society of India, P.301

41. ***M. K. SURAPPA*** (2003)
ALUMINUM MATRIX COMPOSITES: CHALLENGES and OPPORTUNITIES
Sadhana, Vol.28, P.319

*42. B. JOHANNESSON, S.L. OGIN AND **M.K. SURAPPA**, P. TSAKIROPOULOUS, S. BRYNJOLFSSON, AND I. O. THORBJORNSSON* (2001)
EFFECT OF REINFORCEMENT GEOMETRY ON MATRIX STRESSES IN ALUMINIUM MATRIX COMPOSITES
Scripta Materialia, Vol. 45, P. 993

43. *K. NARASIMHA RAO, S. KUMAR AND **M.K. SURAPPA*** (2001)
INVESTIGATION OF SERRATED FLOW BEHAVIOUR IN Al-10Mg ALLOY
Materials Science and Technology, Vol. 17, P.113

*44. YOSHIRO IWAI, TOMANI HONDA, T. MIYAJIMA, YOSHIHUMI IWASAKI AND **M. K. SURAPPA,** J.F. XU* (2000)
DRY SLIDING WEAR BEHAVIOUR OF Al_2O_3 FIBER REINFORCED ALUMINUM COMPOSITES
Composite Science and Technology, Vol.60, P.1781

45. *R.A. SARAVANAN* AND ***M.K. SURAPPA*** (2000)
FABRICATION AND CHARACTERIZATION OF PURE MAGNESIUM-30 vol% SiCp PARTICLE COMPOSITE
Materials Science and Engineering A, Vol. 276, P.108

*46. G. KARMAKER, R. SEN, A.K. MEIKAP, S.K. CHATTOPADHYA, S.K. CHATTERJEE AND **M.K. SURAPPA*** (1999)
THE STUDIES ON MICRO-STRUCTURAL DEFECTS IN DEFORMED COMPOSITE MATRIX OF Al- Si- Mg AND SiC
Japan Journal of Applied Physics, Vol. 38, P. 6450

47. *SUCHETA NAGARAJAN, B. DUTTA AND **M.K. SURAPPA*** (1999)
EFFECT OF SiC PARTICLES ON THE SIZE AND MORPHOLOGY OF EUTECTIC SILICON IN CAST A356 Al/SiCp COMPOSITES
Composite Science and Technology, Vol.59, P. 897

*48. GUPTA M, **M.K. SURAPPA** AND QIN. S* (1998)
REGARDING THE EFFECT OF AGING HEAT TREATMENT ON THE FAILURE BEHAVIOUR OF A SiC REINFORCED Al BASED METAL MATRIX COMPOSITE
Indian J Eng. Materials Vol. 5, P.1

49. *N.R.M.R. BHARAGAVA, I. SAMAJDAR, S. RANGANATHAN AND **M. K. SURAPPA*** (1998)
ROLE OF COLD WORK AND SiC REINFORCEMENTS ON THE β^1/β PRECIPITATION IN Al-10% Mg ALLOY
Metallurgical and Materials Transactions, Vol. 29A, P. 2835

50. *WANG RONGMING, **M.K. SURAPPA,** LI CHUNZHI AND YAN MINGGAO* (1998)
MICROSTRUCTURE AND INTERFACE STRUCTURE STUDIES OF SiC_P-REINFORCED Al (6061) METAL-MATRIX COMPOSITES
Materials Science and Engineering A Vol. 254, P.219

*51. J. PAN, **M. K. SURAPPA,** R.A. SARAVANAN, B.W. ZIU AND D.M. YANG* (1998)
FABRICATION AND CHARACTERIZATION OF SiC/$MoSi_2$ COMPOSITES
Materials Science and Engineering A, Vol. 244, P.191

52. *B. DUTTA AND **M . K. SURAPPA*** (1998)
MICROSTRUCTURE EVOLUTION DURING MULTIDIRECTIONAL SOLIDIFICATION OF Al-Cu-SiC COMPOSITES
Composites A, Vol. 29A, P.565

53. *R.A. SARAVANAN, I. SAMAJDAR AND **M.K. SURAPPA*** (1998)
MICROSTRUCTURAL CHARACTERISATION OF THE SUBSURFACE PLASTIC ZONE FORMED DURING EROSION OF A356 Al ALLOY AND COMPOSITES
WEAR, Vol. 215, P.223

54. *B.* DUTTA *AND **M.K. SURAPPA*** (1998)
DIRECTIONAL DENDRITIC SOLIDIFICATION OF A COMPOSITE SLURRY: PART I - DENDRITE MORPHOLOGY
Metallurgical and Material Transactions, Vol. 29A, P.1319

55. *B. DUTTA AND* ***M.K. SURAPPA*** (1998)
DIRECTIONAL DENDRITIC SOLIDIFICATION OF COMPOSITE SLURRY: PART II - PARTICLE DISTRIBUTION
Metallurgical and Material Transactions, Vol. 29A, P. 1329

56. *B. DUTTA, I. SAMAJDAR AND* ***M.K. SURAPPA*** (1998)
PARTICLE RE-DISTRIBUTION AND MATRIX MICROSTRUCTURE EVOLUTION DURING HOT EXTRUSION OF CAST SiCp REINFORCED ALUMINIUM ALLOY MATRIX COMPOSITES
Materials Science and Technology, Vol. 14, P.36

57. M. GUPTA, ***M.K. SURAPPA*** *AND S. QIN* (1997)
EFFECT OF INTERFACIAL CHARACTERISTICS ON THE FAILURE MODE OF SiC REINFORCED AL BASED METAL MATRIX COMPOSITE
Journal of Materials Processing Technology, Vol. 67, P. 94

58. ***M.K. SURAPPA*** (1997)
MICROSTRUCTURE EVOLUTION DURING SOLIDIFICATION OF DRMMCs (DISCONTINUOUSLY REINFORCED METAL MATRIX COMPOSITES): STATE OF ART
Journal of Materials Processing Technology, Vol. 63, P.325

59. *B. DUTTA AND* ***M.K. SURAPPA*** (1997)
STUDIES ON AGE-HARDENING CHARACTERISTICS OF CERAMIC PARTICLE/MATRIX INTERFACES IN Al-Cu-SiCp COMPOSITES USING ULTRA LOW LOAD DYNAMIC MICROHARDNESS MEASUREMENTS
Journal of Materials Research, Vol. 12, P.27

60. *A. RAVIKIRAN AND* ***M.K. SURAPPA*** (1997)
EFFECT OF SLIDING SPEED ON WEAR BEHAVIOUR OF A356 Al-30wt% SiCp MMC, Wear, Vol. 206, P.33

61. *R.A. SARAVANAN, B.N. PRAMILA BAI AND* ***M.K. SURAPPA*** (1997)
EROSION OF A356 Al-SiCp COMPOSITES DUE TO MULTIPLE PARTICLE IMPACT
Wear, Vol. 202, P.154

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Lectures delivered (invited) outside India by Prof. M. K. Surappa during the period 1989- 2013

1 R and D Laboratories of Nippon Steel Corporation (NKK)
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2 Rheo-Technology Corporation
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5 Mitsubushi Metals Research Institute
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Nihon University, Tokyo, May 30, 1989
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7 Research and Development, Swiss Aluminium Ltd.
Neuhausan, July 17, 1991
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10 Naval Surface Warfare Research Centre
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University of California, Irvine, July 26, 1991
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12 Department of Applied Mechanics and Engineering
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Toyama, August 5, 1991
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15 Department of Materials Engineering
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16 Mitsubushi Materials Research Center
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17 School of Applied Science
Nanyang Technological University, Feb, 12, 1993
Singapore

18 Comalco Research Center
Melbourne, Feb 25, 1993
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19 Hong Kong Polytechnic University
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20 Department of Materials Science and Engineering
Kyushu University, Fukuoka, Japan, June 19, 1995

21 Department of Mechanical Engineering
Fukui University, Bunko, June 22, 1995
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22 Laboratory for Material Science and Technology
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University of Wisconsin, Milwaukee, USA, Aug 25, 1995

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University of Mexico, Mexico, Sept. 4, 1995

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Naval Postgraduate School, Monterey CA, U.S.A., Sept. 6, 1995

29 Department of Mechanical and Aerospace Engineering
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31 Department of Materials and Nuclear Engineering
University of Maryland, U.S.A., Sept. 14, 1995

32 Department of Mechanical Engineering
Johns Hopkins University, Baltimore, U.S.A., Sept. 15, 1995

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34 Department of Metallurgy and Materials Science
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37 Department of Engineering Materials and Materials Design
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39 Department of Applied Sciences
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41 Institute of Genie Atomique
EPFL, Lausanne, Switzerland, May 31, 1996

42 Department of Materials Science
Technische Hachschule Darmstadt, Darmstadt, Germany, June 3, 1996

43 Institute for Materials
Department of Materials Science, University of Bochum, Germany,
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44 Institut Fur Werkstoffwissenschaft
Max-plank-institute fur Metallforschung, Stuttgart, Germany, June 7, 1996

45 Department of Mechanical Engineering
Hiroshima University, Japan, 5th June, 1997.

46 Department of Production Systems Engineering
Toyohashi University of Technology, Japan, 9th June 1997.

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Chiba Institute of Technology, Japan, 12th June 1997.

48 Department of Mechanical Systems Engineering
Toyama Prefectural University, Japan 13th June 1997.

49 Department of Machine Design and Materials Technology
Norwegian University of Science and Technology
Trondheim, Norway, 11th March 1998.

50 Materials Department
RISO National Laboratory, Roskilde, Denmark, 15th March 1998.

51 Design and Production Engineering Department
Ain Shams University, Cairo, Egypt, 1st June 1998

52 Department of Production Engineering Department
Alexandria University, Egypt, 4th June 1998

53 Magnesium Research Institute
Dead Sea Magnesium, Beer-Sheva, Israel, 10th June 1998

54 Department of Materials Engineering
Israel Institute of Technology. Haifa, Israel, 17th June 1998

55 Beijing Institute for Aeronautical Materials
Beijing, China, 22nd Oct. 1998

56 Department of Mechanical Engineering
North Eastern University, Shenyang, China, 26th Oct. 1998

57 Department of Materials Engineering
National University of Defense Technology, China, 2nd Nov. 1998

58 Beijing Research Institute of Electrical and Mechanical Technology
Beijing, China, 4th Nov. 1998

59 Dept. of Materials Processing
Royal Institute of Technology, Stockholm, Sweden, 25th Aug. 1999

60 Dept. of Materials Science
Uppsala University, Uppsala, Sweden, 26th Aug. 1999

61 Institute of Materials Science, Tampere University of Technology
Tampere, Finland, 30th Aug. 1999

62 Dept. of Physical Metallurgy and Material Science
Helsinki University of Technology, Finland, 1st Sept. 1999

63 Department of Materials Science
University of Ruhr, Bochum, Germany, 23rd Sept. 1999

64 Department of Materials
Laboratory for Mechanical Metallurgy, Switzerland, 7th Oct. 1999

65 Department of Materials Science and Engineering
Korea Advanced Institute of Science and Technology, 25th Nov. 1999
South Korea

66 Department of Metallurgical Engineering
Chungnam National University, 26th Nov. 1999
South Korea

67 Department of Materials Engineering
University of Wisconsin, 14th Dec., 1999
USA

68 R and D Center for Materials Technology
Hydro Aluminium, 17th Jan. 2002
Norway

69 School of Process and Materials Engineering
University of Witwatersrand, Johannesburg, 24th Jan. 2003
South Africa

70 Department of Applied Physics
University of Alicante, Alicante, 14th June, 2004
Spain

71 Institute of Materials Science and Testing
Vienna University of Technology, Vienna, 16th June, 2004
Austria

72 Institute for Physics of Complex Materials
Swiss Federal Institute of Technology, Lausanne, 18th June, 2004
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73 Cinvestav - Center for Research and Advanced Studies
Saltillo, 25th June, 2004
Mexico

74 Center for Materials Processing and Tribology
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Purdue University, 30th June, 2004
USA

75 Department of Mechanical Engineering
University of Colorado, Denver, 5th July, 2004
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76 Department of Mechanical Engineering
North Carolina A & T State University, Greensboro, 20th September, 2005
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77 Graduate School of Environmental Studies
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Tohoku University, Sendai, 17th January, 2006
JAPAN

78 Department of Mechanical Engineering
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79 Joining and Welding Research Institute
Osaka University, Osaka, 19th January, 2006
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80 Toyota Technological Institute
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81 Department of Production Systems Engineering
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82 Department of Mechanical Engineering
University of Missouri - Rolla 26th June, 2007
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83 Department of Metallurgical Engineering
University of Utah, 28th June 2007
USA

84 Young Investigators Meeting
Boston, USA, 8th to 10th Oct. 2011

85 Young Investigators Meeting
Berlin, Germany, 14th Sep. 2012

86 University of Bochum
Germany, 17th Sep. 2012

87 Department of Mechanical Engineering
University of Colorado
Boulder, USA, 21st to 23rd Oct. 2013

88 MS&T'2013 Conference
Montreal, Canada
27th to 31st October 2013

89 School of Materials Science & Engineering
Georgia Institute of Technology
Atlanta, GA, USA, 25th October 2013