A.V. NARLIKAR (PhD Cantab, ScD Cantab)

PUBLICATIONS

BOOKS:

1. A.V. Narlikar, ***Superconductors***, Under contract with Oxford University Press, forthcoming 2014, pages: 350.

2. A.V.Narlikar and Y.Y.Fu (edited), ***Oxford Handbook of Nanoscience and Technology: Oxford,*** 3 volumes, Oxford: Oxford University Press, 2010, pages*:* approx. over 3000.

Volume 1: *Basic Aspects*
Volume 2: *Materials- Structures, Properties and Characterization Techniques*
Volume 3: *Applications*

3. A.V. Narlikar (edited), ***Frontiers in Superconducting Materials****,* Berlin: Springer Verlag, 2005, pages: xxxi + 1103.

4. A. V. Narlikar (edited), ***Frontiers in Magnetic Materials*****,** Berlin: Springer Verlag: 2005, pages: xxiv +799.

5. A. V. Narlikar (edited), ***High Temperature Superconductivity,*** Berlin: Springer Verlag, 2003.

Volume 1**:** ***Advances in Materials***, p.xx + 503
Volume 2***: Advances in Engineering Applications****,* p.xix + 574

6. Founding Editor of International Book Series, ***STUDIES OF HIGH TEMPERATURE SUPERCONDUCTORS****,* Nova Science Publishers, New York . The inaugural volume was published in 1989. Eleven volumes, edited by Anant Narlikar, were already published in the series by 1993. To provide an illustration of the depth and breadth of the series, titles from 1994 are listed below. The entire series was solely edited by Anant Narlikar.

Since 1994:
Vol.12 : High Tc Squids (1994)
Vol.13 : Thin Films of HTS (1994)
Vol.14 : Magnetization and Field Penetration in HTS (1994)
Vol.15 : Electron Microscopy of HTS (1995)
Vol.16 : High Pressure Effects in HTS (1995)
Vol.17 : Microwave Studies (1996)
Vol.18 : Microwave Studies-II (1996)
Vol.19 : Thermal Properties (1996)
Vol.20 : Tunnelling Studies (1996)
Vol.21 : Conductor Development of HTS (1997)
Vol.22 : Critical Current in HTS (1997)
Vol.23 : Hg-based HTS (1997)
Vol.24 : Hg-based HTS (1997)

Vol.25 : Silver Jubilee Volume (1998)
Vol.26 : Superconducting Quaternary Borocarbides (1998)
Vol.27 : Pseudogap in HTS (1999)
Vol.28 : Microstructures of HTS (1999)
Vol.29 : Miscellaneous Issues (1999)
Vol.30 : Microstructures –II (1999)
Vol.31 : Flux Pinning in HTS (2000)
Vol.32 : AC Losses in Wire and Tapes of HTS (2000)
Vol.33 : Stripe Phase in HTS (2000)
Vol.34 : Organic Superconductors (2000)
Vol.35 : BSCCO System (2001).
Vol.36 : BSCCO System-II (2001)
Vol.37 : New Systems and some Miscellaneous topics (2001)
Vol.38 : Superconducting Magnesium Diboride (2001)
Vol.39 : Josephson Junction Arrays –I (2001)
Vol.40 : Josephson Junction Arrays –II (2002)
Vol.41 : Coated Conductors and Thin Films of YBCO (2002)
Vol.42 : Vortex Physics in HTS (2002)
Vol.43: Thin Films of BSCCO (2002)
Vol.44: Studies of Magnesium diboride-II (2003)
Vol.45: Carbon Based Superconductors (2003)
Vol.46: Magnetic Superconductors (2003)
Vol.47: Irradiation studies of HTS (2004)
Vol.48: Flux dynamics and pinning (2005)
Vol.49: Studies of HTS thin films (2006)
Vol.50: GOLDEN JUBILEE VOLUME (2006)

7. A.V. Narlikar and S.N.Ekbote, ***Superconductivity and Superconducting Materials,*** South Asian Publishers: New Delhi, 1983, pp. xiv +283

II. SELECT RESEARCH PAPERS IN REFEREED JOURNALS

Have published over 400 research papers in international refereed journals. Below is a list of select research papers, published over the last 20 years.

1) A.V. Narlikar, S.B. Samanta and P.K. Dutta, High resolution studies of C-60 films by scanning tunnelling microscopy, *Philosophical Trans. Royal Society (London),* 346 (1994) 307.

2) A.V. Narlikar, S.B. Samanta and P.K. Dutta, Observational studies of defect carbon cage structures of C-60 by high resolution scanning tunnelling microscopy, *Proceedings of the Royal Society,* London, A444 (1994) 325.

3) R. Lal, S.P. Pandey, A.V. Narlikar and E. Gmelin, Tc depression in $YBa_2Cu_{4-x}M_x$ system for M: Fe,Ni,Zn and Ga, *Phys. Rev. B,* 49 (1994) 6382.

4) V.P.S. Awana, V.N. Moorthy and A.V. Narlikar, Thermoelectric power of Bi-2223 based on two band model, *Phys. Rev. B,* 49 (1994) 6385.

5) V.P.S. Awana and A.V. Narlikar, Role of calcium in in supressing the superconductivity of $Y_{1-x}Ca_xBa_2Cu_3O_{7-y}$, *Phys. Rev. B,* 49 (1994) 6353.

(*Note: The above three papers appeared in the same issue of PRB*)

6) V.P.S. Awana, A. Tulapurkar, S.K. Malik and A.V. Narlikar, Role of Ca in enhancing the superconductivity of $YBa_2Cu_3O_{7-y}$, *Phys. Rev. B,* 50 (1994) 594.

7) A.K. Bandyopadhyay, D. Varandani, E. Gmelin, and A.V. Narlikar, Resistivity, magnetic susceptibility and specific heat studies of $ErBa_2(Cu_{1-x}M_x)_3O_{7-y}$, for M:Zn,Fe,Co and Ga; the effect of site dependent substitutional disorder, *Phys. Rev. B,* 50 (1994) 462.

8) S.K. Agarwal, R. Lal, V.P.S. Awana, S.P. Pandey and A.V. Narlikar, Superconductivity of Pr doped $(Y,Eu)Ba_2Cu_4O_8$ system, *Phys. Rev. B,* 50 (1994) 10265.

9) O.G. Singh, B.D. Padalia, O. Prakash, A.V. Narlikar and L.C. Gupta, Phase diagram for the electron doped Nd-Ce-Cu-O superconducting system, *Physica C,* 219 (1994) 156.

10) S. Sathaih, R.N. Soni, H.C. Joshi, L.S. Grigoryan, H.D. Bist, A.V. Narlikar, S.B. Samanta and V.P.S. Awana, Micro-Raman spectroscopy and STM studies of $Bi_2Sr_2CaCu_2O_8$ intercalated with Ni-phthalcyanine and benzene, *Physica C,* 221 (1994) 177.

11) L. Grigoryan, K. Yakushi, A.V. Narlikar and S.B. Samanta, Contribution of interblock coupling to Tc in high Tc Bi Oxides, *Modern Phys. Letters B*, 8 (1994) 251.

12) S. Bhargava, H.D. Bist, S.B. Samanta, A.V. Narlikar, A. Rangan and J. Narayan, Nanostructures in laser ablated diamond-like carbon films through scanning tunnelling microscopy, *Solid State Communs,* 90 (1994) 205.

13) S.H. Pawar, V.N. Shinde and A.V. Narlikar, Electrosynthesis of compound layers of high Tc superconductors, in Anant Narlikar ed., *Studies of High Temperature Superconductors, Vol.13,* Nova Science Publishers, New York, 1994 , 275.

14) S.K. Agarwal and A.V. Narlikar, Substitutional and related studies in cuprate superconductors, *Progress in Crystal Growth and Characterization,* 28 (1994) 219.

15) G.L. Bhalla, B. Kumar, A. Malik, S.K. Agarwal, G.C. Trigunayat and A.V. Narlikar, ŸBCO stsbility against ultradilute nitric acid, *Phys. Stat. Sol. A,* 143 (1994) 131.

16) M. Shahbuddin, H.D. Bist and A.V. Narlikar, Effect of temperature on low field microwave absorption in pure Y-123 near Tc, *Physica C,* 235-240 (1994), 2054.

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18) R. Lal, V.P.S. Awana, S.P. Pandey, V.S. Yadav, D. Varandani, A.V. Narlikar, A. Chhikara and E. Gmelin, Tc degradation in cuprate superconductors from the resistivity of $YBa_2(Cu_{1-x}\ M_x)_4O_8$ for M: Fe and Ni, *Phys. Rev. B,* 51 (1995) 539.

19) B.V. Kumaraswamy, R. Lal and A.V. Narlikar, "Low field ac susceptibility study of flux creep in metal substituted Er-123", *Phys. Rev. B,* 52 (1995) 1320.

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21) A.V. Narlikar and S.B. Samanta, Scanning tunnelling microscopic studies of fullerene C-60 and its intercalated superconductors, *Fullerene Science and Technology,* 3 (1995) 727.

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30) V.P.S. Awana, D.A. Landirez, J.M. Ferreira, J. Albino Aguiar, R.V. Singh and A.V. Narlikar, Normal state magnetism of Zn doped and oxygen deficient $CaLaBaCu_3O_7$ superconductor, *Modr. Phys. Letters B,* 10 (1996) 619.

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