MANISH CHHOWALLA
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A. PROFESSIONAL PREPARATION:

Rutgers University, Materials Science and Engineering, B.S., 1992
University of Cambridge, (UK), Electrical Engineering, Ph.D., 1998

B. APPOINTMENTS:

Professor (& Director of "Nanotechnology for Clean Energy" NSF IGERT Program), Materials Science and Engineering, Rutgers University, 2010-Pres
Donald H Jacobs Chair in Applied Physics, Materials Science and Engineering, Rutgers University, Jan 1 2009-Dec. 31, 2011.
Professor in Materials, Department of Materials, Imperial College London, 2009-2010
Associate Professor, Materials Science Engineering, Rutgers University, 2006-2009
Assistant Professor, Materials Science Engineering, Rutgers University, 2003-2006
Royal Academy of Engineering Postdoctoral Research Fellow, Engineering Department, University of Cambridge, Cambridge UK, 2000-2003
Research Associate, Engineering Department, University of Cambridge, Cambridge UK., 1998-2000
Ph.D. Student, Engineering Department, University of Cambridge, Cambridge UK, 1995-1999
Scientist, Multi-Arc Inc., Rockaway, NJ, 1992-1994

C. AWARDS AND ACHIEVEMENTS:

- Co-Founder of GraphenEx – Start-up Company Supplying high quality graphene and related materials.
- Donald H Jacobs Chair in Applied Physics (Jan 1, 2009 – Dec 31, 2012).
- Visiting Professor in Department of Materials at Imperial College London
- UK Royal Society's Wolfson Merit Award.
- U.S. National Science Foundation's CAREER Award for Young Investigators (April 2006)
- Sigma Xi Outstanding Young Investigator for the Mid-Atlantic Region (2006).
- The Rutgers University Board of Trustees Fellowship for Scholarly Excellence (2007).
- Rutgers University Merit Award from 2003 – 2009.
- Royal Academy of Engineering Research Fellowship, University of Cambridge (2001 – 2003).
- Wolfson College (University of Cambridge) Junior and Senior Research Fellow
- Cambridge University Newton Trust Scholarship
- Member of Sigma Xi Scientific Honor Society since 2003.
- > 80 Invited Talks at Major International Conferences
- Over 120 publications according to Web of Science (3 in Nature, 2 in Nature Materials, 1 in Nature Nanotechnology, 2 in Nature Chemistry) with over 6000 citations (H index = 39, > 48 citations/paper).

D. PROFESSIONAL SERVICE ACCOMPLISHMENTS:

- Editorial Board of *Advances in Materials Science and Engineering*
- Member of the Advisory Board of Graphenea (Graphene based start up company in Spain).
- Primary organizer of Symposium L: Large area electronics based on carbon nanotubes and graphene , Materials Research Society Fall Meeting, 2009.
- Co-organizer of Symposium P: Science and technology of nanotubes, nanowires, and graphene, European Materials Research Society Meeting, 2010.

- Symposium Chair and Program Committee at the Annual SPIE Nanoscience and Engineering Symposium on Carbon Nanotubes, Graphene and Associated Devices Symposium, San Diego, CA (2008 – 2010).
- Co-organizer of the first 2007 NANO Forum on Carbon Nanotubes-Based Transparent Conducting Films and TFTs held in Suwon, Korea, November 1-2, 2007.
- International Session Organizer and Chair for Nano-Singapore 2006
- Organizing and international committee for The First International Conference on One Dimensional Nano-Materials (ICON), Taipei, Taiwan Jan. 10 – 15 (2005).
- Session chair for the last six years at the International Conference on Metallurgical Coatings and Thin Films.
- Member of the Materials Research Society, American Physical Society, American Ceramic Society and American Association for the Advancement of Science.
- Treasurer for Sigma Xi Rutgers Chapter
- Proposal Reviewer Panelist for NSF, EPA, DoD, DoE, and EPSRC (UK) amongst numerous others.
- Referee for journals such as Nature, Nature Materials, Nature Nanotechnology, Advanced Materials, Applied Physics Letters, Nano Letters, IEEE Transactions on Nano-electronics, Nanotechnology amongst others.

E. EDUCATIONAL SERVICE ACCOMPLISHMENTS:

- Development of new interdisciplinary graduate curriculum, *Nanotechnology for Clean Energy*, and research training.
- Developed two new courses (Introduction to Nano- Electronics, - Photonics, and – Magnetics and accompanying Laboratory Module). Modernized introductory laboratory course to include polymers and metals along with ceramics. Introduced modules in the nano course include nanotechnology and organic electronics.
- Dr Hisato Yamaguchi won the Best Poster Award at the 2011 MRS Spring Meeting
- PhD student (Husnu Emrah Unalan) won the MRS Graduate Student Award at MRS FALL 2005 Meeting
- PhD student (Goki Eda) won the EMRS Graduate Student Award, Spring 2008.
- PhD student (Goki Eda) won the Dean's Award for Excellence in Research for PhD dissertation (2009).
- PhD student (Varun Gupta) was awarded the Outstanding Symposium Paper Award at MRS Fall 2008.
- Faculty Mentor for MRS and ASM Chapters

Mentoring: Successfully Mentored Graduate Students and Postdocs:

1. Husnu Emrah Unalan (PhD Student), now an Assistant Professor (and winner of Outstanding Young Investigator Award in Turkey) at the Middle Eastern Technical University, Ankara, Turkey.
2. Shashi Paul (Postdoc), now the Head of the Emerging Technology Centre at DeMontford University in Leicester, UK.
3. Giovanni Fanchini (Postdoc), now an Assistant Professor (and winner of the Canadian Research Chair) at the University of Western Ontario, London Ontario, Canada.
4. Alokik Kanwal (PhD Student), now a Postdoc at New Jersey Institute of Technology.
5. Steve Miller (PhD Student), now a Postdoc at Rutgers University.
6. Bhavin Parekh (MSc), now a Senior Scientist at Nanomech LLC, Little Rock, Arkansas.
7. Goki Eda (PhD Student), now a UK Royal Society Newton International Fellow at Imperial College London and soon to be NRF Fellow Assistant Professor at National University of Singapore.

8. Cecilia Mattevi (Postdoc), now a Imperial College Junior Research Fellow at Imperial College London.
9. Varun Gupta (PhD Student), now at Intel Corp. May 1, 2010.
10. Sara Reynaud, now a Postdoc at Rutgers University.
11. Wojtek Tutak, now a National Research Council Fellow at NIST, USA.

- Served on numerous PhD dissertation committees as the external advisor for Universities around the world (Oxford University, Cambridge University, Nanyang Technological University (Singapore), Indian Institutes of Technology, Abo Akademie (Finland), University of Ulster (Belfast, Northern Ireland), and National University of Singapore).

F. EXTERNAL GRANTS AWARDED AT RUTGERS UNIVERSITY:

1. PI on "Collaborative Research: " Optimization of Opto-electronic Properties of Graphene Oxide for Large Area Electronics" National Science Foundation, Under Consideration ($275,000).
2. PI on "Electrodes for large area electronics with partially oxidized graphene" Funded by the National Science Foundation, July 1, 2011 – June 30, 2014, $360,000.
3. PI on "IGERT: Nanotechnology for clean energy" from the National Science Foundation, July 1, 2009 – June 30, 2014, $3,099,000.
4. PI on "Synthesis of and device fabrication from single walled GaN nanotubes" from Samsung Advanced Institute of Technology, July 1, 2008 – Jan 2010, $85,000.
5. PI on "Investigation of boron carbide structure and properties with Si and Al doping" from the Army Research Office, August 15, 2007 – August 14, 2010, $431,842.
6. Co-PI on "Engineered Nano-Composite Oxides for Missile Domes" from ONR-DARPA, Rutgers Share: $849,351. PI: Bernie Kear, Co-PI: Adrian Mann, Aug. 1, 2007 – July 31, 2009, Prof. Chhowalla's share of funding involves 1 postdoc and 1 month of summer salary: $220,000.
7. PI on Early Faculty Development National Science Foundation (NSF) CAREER Award "Organic memory devices based on insulating polymers and C60 fullerene molecules" from Electronics, Photonics, Devices Technology (EPDT) Program at NSF (Electrical and Communications Systems (ECS) 0543867), April 1, 2006 – March 30, 2011 ($399,000).
8. PI on "Investigation of structure and properties of Si doped boron carbide" from Ceramic Division (CER) in the Division of Materials Research (DMR) at NSF (0604314), July 1, 2006 – June 30, 2009 ($420,000).
9. Co-PI on "Dynamic behavior and optimization of advanced armor ceramics" US Army Weapons and Materials Directorate in response to Army Research Laboratory Materials Research Program Announcement for The Materials Centers for Excellence, 4/1/06 – 3/30/15, $6,750,000, P.I.: Prof. Richard A. Haber. Prof. Chhowalla's share of funding involved one Ph.D. Student and 0.5 month of summer salary (~ $70k/year for a total = $210,000 over three years).
10. PI on "Single wall carbon nanotube architectures for molecular-scale spin injection devices" (ECS 0400501) from EPDT Program at NSF, 4/1/04 – 3/30/07 ($179,000).
11. PI on "Determination of root cause of failure in boron carbide" from Ceramic and Composite Materials Center (CCMC) at Rutgers, NSF – Industry University Cooperative Research Center (IUCRC), 4/1/04 – 3/30/07 ($270,000).
12. PI on "Large Scale Synthesis of Carbon Nanostructures" from US – Israel Bi-national Fund Proposal Number 2002303, 9/1/03 – 8/30/07 ($116,000).
13. PI on "Carbon Nanotube Gas Sensors" from NASA – N J Space Grant Consortium – A NASA Sponsored Program (Federal Grant), 9/1/03 – 8/30/04 ($25,000 with $25,000 in kind support from Ion Bond Inc.).

14. Co-Investigator on “Combined Micro-Raman and Near-field Scanning Optical Microscope for Characterization of Nanostructured Materials” from Defense University Research Instrumentation Program (DURIP) Award No. N000140410809, Office of Naval Research ($279,317). P.I.: Prof. Adrian B. Mann. Prof. Chhowalla wrote a significant portion of the proposal justifying the need for the instrument and its relation to use for characterization of carbon nanostructures.
15. Investigator on "Integrated Imaging System for Transmission Electron Microscope" NSF-DMR- Instrument for Research 0414520, 8/1/2004 - 7/31/2005 ($199,000). P. I.: Prof. Frederic Cosandey. Prof. Chhowalla wrote a section of the proposal dealing with the use of a transmission electron microscope for characterization of materials synthesized in his research group.

LIST OF PUBLICATIONS:

1. Paul H. Wöbkenberg, Goki Eda, Dong-Seok Leem, John C. de Mello, Donal D. C. Bradley, Manish Chhowalla, Thomas D. Anthopoulos "Reduced Graphene Oxide Electrodes for Large Area Organic Electronics" *Advanced Materials* **23**, 1558–1562 (2011).

2. Cecilia Mattevi, HoKwon Kim, and Manish Chhowalla "A review of chemical vapour deposition of graphene on copper" (Review) *Journal of Materials Chemistry* (2010). DOI:10.1039/cojm02126a.

3. Piotr Matyba, Hisato Yamaguchi, Manish Chhowalla, Nathaniel D. Robinson, and Ludvig Edman "Flexible and Metal-Free Light-Emitting Electrochemical Cells Based on Graphene and PEDOT-PSS as the Electrode Materials" *ACS Nano* (2011). DOI: 10.1021/nn102704h.

4. Kian Ping Loh, Qiaoliang Bao, Goki Eda, and Manish Chhowalla "Graphene oxide as a chemically tunable platform for optical applications" (Review) *Nature Chemistry* **2**, 1015–1024 (2010).

5. Muge Acik, Cecilia Mattevi, Cheng Gong, Geunsik Lee, Kyeongjae Cho, Manish Chhowalla, and Yves J. Chabal "The Role of Intercalated Water in Multilayered Graphene Oxide" *ACS Nano* 4 (10), 5861–5868 (2010).

6. M.Acik, G.Lee, C.Mattevi, M.Chhowalla, K.Cho, and Y.J.Chabal "Unusual infrared-absorption mechanism in thermally reduced graphene oxide" *Nature Materials* 9, 840–845 (2010).

7. Akbar Bagri, Cecilia Mattevi, Muge Acik, Yves J. Chabal, Manish Chhowalla and Vivek B. Shenoy "Structural evolution during the reduction of chemically derived graphene oxide" *Nature Chemistry* 2, 581–587 (2010).

8. Shao-Sian Li, Kun-Hua Tu, Chih-Cheng Lin, Chun-Wei Chen and Manish Chhowalla “Solution-processable graphene oxide as an efficient hole transport layer in polymer solar cells” *ACS Nano* 4 (6), 3169–3174 (2010).

9. Goki Eda and Manish Chhowalla "Chemically Derived Graphene Oxide: Towards Large-Area Thin-Film Electronics and Optoelectronics" (Review) *Advanced Materials* **22** 2392-2415 (2010).

10. "Graphene and mobile ions: All plastic solution processed light emitting devices" P Matyba, H Yamaguchi, G Eda, M Chhowalla, L Edman and N D Robinson, ACS Nano, 4, 637 – 642 (2010).

11. "Highly uniform 300mm wafer scale deposition of single and multilayered chemically derived graphene thin films" H Yamaguchi, G Eda, C Mattevi and M Chhowalla, ACS Nano 4, 524 – 528 (2010).

12. "Blue photoluminescence from chemically derived graphene oxide" G Eda, Y Y Lin, C Mattevi, H Yamaguchi, H A Chen, I S Chen, C W Chen, M Chhowalla, Advanced Materials 22, 505-+ (2010).

13. "UV-reduction of graphene oxide and its application as an interfacial layer to reduce the back-transport reactions in dye-sensitized solar cells" S R Kim, M K Parvez and M Chhowalla, Chemical Physics Letters 483, 124 – 127 (2009).

14. "Does hydrogen change the fullerenelike structure in CNx thin films?" D Roy, M Chhowalla, N Hellegren and G A J Amaratunga, Journal of Vacuum Science A 27, 227-1230 (2009).

15. "Insulator to semimetal transition in graphene oxide" G Eda, C Mattevi, H Yamaguchi, H K Kim and M Chhowalla, Journal of Physical Chemistry C 113, 15768-15771 (2009).

16. "Evolution of electrical, chemical and structural properties of transparent and conducting chemically derived graphene thin films" Cecilia Mattevi, Goki Eda, Stefano Agnoli, Steve Miller, K. Andre Mkhoyan, Ozgur Celik, Daniel Mastrogiovanni, Gaetano Granozzi, Eric Garfunkel, and Manish Chhowalla, Advanced Functional Materials 19, 2577 – 2583 (2009).

17. "Toxicity induced enhanced extracellular matrix production in osteoblastic cells cultured on single-walled carbon nanotube networks" W Tutak, K H Park, A Vasilov, V Starovoytov, G Fanchini, S Q Cai, N C Partridge, F Sesti and M Chhowalla, Nanotechnology 20, 255101 (2009).

18. "Zinc oxide networks for macro-electronics" H E Unalan, Y Zhang, P Hiralal, S Dalal, D P Chu, G Eda, K B K Teo, M Chhowalla, W I Milne and G A J Amaratunga, Applied Physics Letters 94, 163504 (2009).

19. "Atomic and electronic structure of graphene oxide" K A Mkhoyan, A W Countryman, J Silcox, D A Stewart, G Eda, C Mattevi, S Miller and M Chhowalla, Nano Letters 9, 1058 – 1063 (2009).

20. "Graphene based composite thin films for electronics" G Eda and M Chhowalla, Nano Letters 9, 814 – 818 (2009).

21. "Flexible organic photovoltaics from zinc oxide nanowires grown on transparent and conducting single walled carbon nanotube thin films" H E Unalan, P Hiralal, D Kuo, B Parekh, G A J Amaratunga and M Chhowalla, Journal of Materials Chemistry 18, 5909 – 5912 (2008).

22. "Field emission from graphene based composite thin films" G Eda, H E Unalan, N Rupesinghe, G A J Amaratunga and M Chhowalla, Applied Physics Letters 93, 233305, (2008).

23. "ZnO Nanowire and WS2 Nanotube Electronics" H E Unalan HE, Y Yang, Y Zhang, P Hiralal, D Kuo, S Dalal, T Butler, S N Cha, J E Jang, K Chremmou, G Lantaris, K Suzuki, H

Matsumoto, M Minagawa, M Chhowalla, A Tanioka, W I Milne, R Tenne, G A J Amaratunga, IEEE Transactions on Electronic Devices 55, 2988 – 3000 (2008).

24. "Optical anisotropy in single-walled carbon nanotube thin films: Implications for transparent and conducting electrodes in organic photovoltaics" G Fanchini, S Miller, B Parekh and M Chhowalla, Nano Letters 8, 2176 – 2179 (2008).

25. "In situ monitoring of structural changes in boron carbide under electric fields" G Fanchini, V Gupta, A B Mann, M Chhowalla, Journal of American Ceramic Society 91, 2166 – 2169 (2008).

26. "Transparent and conducting electrodes for organic electronics from reduced graphene oxide" G Eda, Y Y Lin, S Miller, C W Chen, W F Su and M Chhowalla, Applied Physics Letters 92, 233305 (2008).

27. "Bundling dynamics of single walled carbon nanotubes in aqueous suspensions" G Eda, G Fanchini, A Kanwal and M Chhowalla, Journal of Applied Physics 103, 093113 (2008).

28. "Large-area ultrathin films of reduced graphene oxide as a transparent and flexible electronic material" G Eda, G Fanchini and M Chhowalla, Nature Nanotechnology 3, 270 – 274 (2008).

29. "Transparent and conducting SWNT thin films for flexible electronics" M Chhowalla, Journal of the Society for Information Display 15, 1085-1088 (2007), Invited Review.

30. "Investigation of nanoscale morphological changes in organic photovoltaics during solvent vapor annealing" S Miller, G Fanchini, Y Y Lin, C Li, C W Chen, W F Su, M Chhowalla, Journal of Materials Chemistry 18, 306-312 (2008).

31. "Nanomechanics of a high H/E carbonaceous material" N Raykar, V Gupta, B Kear, M Chhowalla, A B Mann, Scripta Materialia 57, 925-928 (2007).

32. "A fullerene-single wall carbon nanotube complex for polymer bulk heterojunction photovoltaic cells", C Li, Y Chen, Y Wang, Z Iqbal, M Chhowalla and S Mitra, Journal of Materials Chemistry 17, 2406-2411 (2007).

33. "Voltage induced dependence of Raman active modes in single walled carbon nanotube thin films", G Fanchini, H E Unalan and M Chhowalla, NanoLetters 7, 1129 – 1133 (2007).

34. "Improved conductivity of transparent single-wall carbon nanotube thin films via stable post deposition functionalization" B Parekh, G Fanchini, G Eda and M Chhowalla, Applied Physics Letters 90, 121913 (2007).

35. "Modification of transparent and conducting single wall carbon nanotube thin films via bromine functionalization", G Fanchini, H E Unalan, and M Chowalla, Applied Physics Letters 90, 092114 (2007).

36. "Stable, three layered organic memory devices from C_{60} molecules and insulating polymers" A Kanwal and M Chhowalla, Applied Physics Letters 89, 203103 (2006).

37. "Behavior of disorder in boron carbide under stress" G Fanchini, J M McCauley and M Chhowalla, Physical Review Letters 97, 035502 (2006).

38. "Optoelectronic properties and confinement effects in transparent and conducting single wall carbon nanotubes" G Fanchini, H E Unalan and M Chhowalla, Applied Physics Letters 88, 191919 (2006).

39. “On the use of Ga-In eutectic and halogen light source for testing P3HT-PCBM organic solar cells” A Du Pasquier, S Miller and M Chhowalla, Solar Energy Materials and Solar Cells 90, 1828 – 1839 (2006).

40. “Electrical transport between epitaxial manganites and carbon nanotubes” L E Hueso, G Burnell, J L Prieto, L Granja, C Bell, D J Kang, M Chhowalla, S N Cha, J E Jang, G A J Amaratunga and N D Mathur, Applied Physics Letters 88, 083120 (2006).

41. “Design Criteria for Transparent Single-Wall Carbon Nanotube Thin-Film Transistors” H Emrah Unalan, G Fanchini, A Kanwal, A D Pasquier and M Chhowalla, Nano Letters, Web Release Date: 25-Feb-2006; (Letter) 6(4); 677-682.

42. “Memory effect in thin films of insulating polymer and C-60 nanocomposites” S Paul, A Kanwal, M Chhowalla, Nanotechnology 17, 145-151 (2006).

43. “Irreversible blocking of ion channels using functionalized single-walled carbon nanotubes” M Chhowalla, H Emrah Unalan, Y B Wang, Z Iqbal, K H Park and F Sesti, Nanotechnology 16, 2982-2986 (2005).

44. “Conducting and transparent single-wall carbon nanotube electrodes for polymer-fullerene solar cells” A D Pasquier, H Emrah Unalan, A Kanwal, S Miller and M Chhowalla, Applied Physics Letters 87, Art. No. 203511 (2005).

45. “Investigation of single-walled carbon nanotube growth parameters using alcohol catalytic chemical vapour deposition” H Emrah Unalan and M Chhowalla, Nanotechnology 16, 2153-2163 (2005).

46. “Thin films of hard cubic Zr_3N_4 stabilized by stress” M Chhowalla and H Emrah Unalan, Nature Materials 4, 317-322 (2005) (This article was featured in *Science* and the *American Ceramic Society Bulletin* as Research Highlights).

47. “Thin-film metal catalyst for the production of multi-wall and single-wall carbon nanotubes” R G Lacerda, K B K Teo, A S Teh, M H Yang, S H Dalal, D A Jefferson, J H Durrell, N L Rupesinghe, D Roy, G A J Amaratunga, W I Milne, F Wyczisk, P Legagneux, M Chhowalla, Journal of Applied Physics 96, 4456-4462 (2004).

48. “Plasma composition during plasma-enhanced chemical vapor deposition of carbon nanotubes” M S Bell, R G Lacerda, K B K Teo, N L Rupesinghe, G A J Amaratunga, W I Milne and M Chhowalla, Applied Physics Letters 85, 1137-1139 (2004).

49. “Probing carbon nanoparticles in CNx thin films using Raman spectroscopy” D Roy M Chhowalla, N Hellgren, T W Clyne, G A J Amaratunga, Physical Review B 70, art. no. 035406 (2004).

50. “Large scale synthesis of single-walled carbon nanohorns by submerged arc” H Wang, M Chhowalla, N Sano, S Jia and G A J Amaratunga, Nanotechnology 15, 546 – 550 (2004).

51. “The role of the catalytic particle in the growth of carbon nanotubes by plasma enhanced chemical vapor deposition” C Ducati, I Alexandrou, M Chhowalla, J Robertson and G A J Amaratunga, Journal of Applied Physics 95, 6387-6391 (2004).

52. “Carbon nanohorns hybridized with a metal-included nanocapsule” N Sano, T Kikuchi, H L Wang, M Chhowalla and G A J Amaratunga, Chemical Physics Letters 42, 95-99 (2004).

53. “Growth of high quality single wall nanotubes without amorphous carbon” R G Lacerda, A S Teh, M H Yang, K B K Teo, N L Rupesinghe, S H Dalal, K Koziol, D Roy, G A J Amaratunga, W I Milne and M Chhowalla, Applied Physics Letters 84, 269-271 (2004).

54. “Friction and wear at nanometer scale: a comparative study of hard carbon films” R Prioli, M Chhowalla and L Freire, Diamond and Related Materials 12, 2195-2202 (2003).

55. “Superhydrophobic Carbon Nanotube Forests” K K S Lau, J Bico, K B K Teo, M Chhowalla, G A J Amaratunga, W I Milne, G H McKinley and K K Gleason, Nano Letters 3, 1701-1705 (2003).

56. “Single wall carbon nanotubes are a new class of ion channel blockers” K H Park, M Chhowalla, Z Iqbal and F Sesti, Journal of Biological Chemistry 278, 50212 – 50216 (2003).

57. “Pressure effects on nanotubes formation using the submerged arc in water method” N Sano, M Naito, M Chhowalla, T Kikuchi, S Matsuda, K Iimura, H L Wang, T Kanki and G A J Amaratunga, Chemical Physics Letters 378, 29-34 (2003).

58. “Ion energy and charge state distributions in zirconium nitride arc plasma” M Chhowalla Applied Physics Letters 83, 1542-1544 (2003).

59. “Lateral field emitters fabricated using carbon nanotubes” A S Teh, S B Lee, K B K Teo, M Chhowalla, W I Milne, D G Hasko, H Ahmed and G A J Amaratunga, Microelectronic Engineering 67, 789-796 (2003).

60. “Suspended multiwalled carbon nanotubes as self-aligned evaporation masks” S B Lee, L A W Robinson, K B K Teo, M Chhowalla, G A J Amaratunga, W I Milne, D G Hasko and H Ahmed, Journal of Nanoscience and Nanotechnology 4, 325-328 (2003).

61. “Fabrication of multiwalled carbon nanotube bridges by poly-methylmethacrylate suspended dispersion” S B Lee, K B K Teo, G A J Amaratunga, W I Milne, M Chhowalla, D G Hasko and H Ahmed, Journal of Vacuum Science and Technology B 21, 996-999 (2003).

62. “Characterisation of carbon nano-onions using Raman spectroscopy” D Roy, M Chhowalla, H Wang, N Sano, I Alexandrou, T W Clyne and G A J Amaratunga, Chemical Physics Letters 373 52-56 (2003).

63. “Electrical and field emission investigation of individual carbon nanotubes from plasma enhanced chemical vapor deposition” W I Milne, K B K Teo, M Chhowalla, G A J Amaratunga, S B Lee, D G Hasko, H Ahmed, O Groening, P Legagneux, L Gangloff, J P Schnell, G Pirio, D Pribat, M Castignolles, A Loiseau, V Semet and V T Binh Diamond and Related Materials 12, 422-428 (2003).

64. “Field emission vacuum power switch using vertically aligned carbon nanotubes” N L Rupesinghe, M Chhowalla, K B K Teo and G A J Amaratunga, Journal of Vacuum Science and Technology B 21, 338-343 (2003).

65. “Fabrication and electrical characteristics of carbon nanotube-based microcathodes for use in a parallel electron-beam lithography system” K B K Teo, M Chhowalla, G A J Amaratunga, W I Milne, P Legagneux, G Pirio, L Gangloff, D Pribat, V Semet, V T Binh, W H Bruenger, J Eichholz, H Hanssen, D Friedrich, S B Lee, D G Hasko and H Ahmed Journal of Vacuum Science and Technology B 21, 693-697 (2003).

66. “Carbon onions: Carriers of the 217.5 nm interstellar absorption feature” M Chhowalla, H Wang, N Sano, K B K Teo, S B Lee and G A J Amaratunga, Physical Review Letters 90, art. no.155504 (2003).

67. “Fabrication of carbon nanotube lateral field emitters” S B Lee, A S Teh, K B K Teo, M Chhowalla, D G Hasko, W I Milne, G A J Amaratunga and H Ahmed Nanotechnology 14, 192-195 (2003).

68. “Plasma enhanced chemical vapour deposition carbon nanotubes/nanofibres - how uniform do they grow?” K B K Teo, S B Lee, M Chhowalla, V Semet, V T Binh, O Groening, M Castignolles, A Loiseau, G Pirio, P Legagneux, D Pribat, D G Hasko, H Ahmed, G A J Amaratunga and W I Milne Nanotechnology 14, 204-211 (2003).

69. “Fabrication of self-aligned side gates to carbon nanotubes” L A W Robinson, S B Lee, K B K Teo[s], M Chhowalla, G A J Amaratunga, W I Milne, D A Williams, D G Hasko and H Ahmed Nanotechnology 14, 290-293 (2003).

70. “Fabrication of inorganic molybdenum disulfide fullerenes by arc in water” N Sano, H L Wang, M Chhowalla, I Alexandrou, G A J Amaratunga, M Naito and T Kanki, Chemical Physics Letters 368, 331-337 (2003).

71. “Characteristics of multiwalled carbon nanotube nanobridges fabricated by poly(methylmethacrylate) suspended dispersion” S B Lee, K B K Teo, L A W Robinson, A S Teh, M Chhowalla, D G Hasko, G A J Amaratunga, W I Milne and H Ahmed, Journal of Vacuum Science and Technology B 20, 2773-2776 (2002).

72. “Seebeck measurements of N-doped diamond thin film” R Horiuchi, K Okano, N Rupesinghe, M Chhowalla and G A J Amaratunga, Physica Status Solidi A –Applied Research 193, 457-461 (2002).

73. “Viability of sub-0.4-nm diameter carbon nanotubes” N Sano, M Chhowalla, D Roy and G A J Amaratunga, Physical Review B 66, art. no. 113403 (2002).

74. “Temperature selective growth of carbon nanotubes by chemical vapor deposition” C Ducati, I Alexandrou, M Chhowalla, G A J Amaratunga and J Robertson Journal of Applied Physics 92, 3299-3303 (2002).

75. “Properties of carbon onions produced by an arc discharge in water” N Sano, H Wang, I Alexandrou, M Chhowalla, K B K Teo, G A J Amaratunga and K Iimura, Journal of Applied Physics 92 (5): 2783-2788 (2002).

76. “Study of multi-walled carbon nanotube structures fabricated by PMMA suspended dispersion” S B Lee, K B K Teo, M Chhowalla, D G Hasko, G A J Amaratunga, W I Milne and H Ahmed, Microelectronic Engineering 61, 475-483 (2002).

77. “Field electron emission from individual carbon nanotubes of a vertically aligned array” V Semet, V T Binh, P Vincent, D Guillot, K B K Teo, M Chhowalla, G A J Amaratunga, W I Milne, P Legagneux and D Pribat, Applied Physics Letters 81, 343-345 (2002).

78. “Carbon nanohorns grown from ruthenium nanoparticles” J F Geng, C Ducati, D S Shephard, M Chhowalla, B F G Johnson and J Robertson, Chemical Communications 10, 1112-1113 (2002).

79. “Fabrication and electrical characteristics of carbon nanotube field emission microcathodes” with an integrated gate electrode G Pirio, P Legagneux, D Pribat, K B K Teo, M Chhowalla, G A J Amaratunga and W I Milne, Nanotechnology 13 1-4 (2002).

80. “Field emission from dense, sparse, and patterned arrays of carbon nanofibers” K B K Teo, M Chhowalla, G A J Amaratunga, W I Milne, G Pirio, P Legagneux, F Wyczisk, D Pribat and D G Hasko, Applied Physics Letters 80, 2011-2013 (2002).

81. “Characterization of plasma-enhanced chemical vapor deposition carbon nanotubes by Auger electron spectroscopy” K B K Teo, M Chhowalla, G A J Amaratunga, W I Milne, G Pirio, P Legagneux, F Wyczisk, J Olivier and D Pribat Journal of Vacuum Science and Technology B 20, 116-121 (2002).

82. “Nanotechnology - Synthesis of carbon 'onions' in water” N Sano, H Wang, M Chhowalla, I Alexandrou and G A J Amaratunga Nature 414, 506-507 (2001).

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91. “Tetrahedral amorphous carbon-silicon heterojunction band energy offsets” by N L Rupesinghe, R J Cole, M Chhowalla, G A J Amaratunga and P Weightman, Diamond and Related Materials 9, 1148-1153 (2000).

92. “Evolution of sp^2 bonding with deposition temperature in tetrahedral amorphous carbon (ta-C) studied by Raman spectroscopy” by M Chhowalla, A C Ferrari, J Robertson and G A J Amaratunga, Applied Physics Letters 76, 1419-1421 (2000).

93. “Field emission from a new form of thin film amorphous carbon having nanoparticle inclusions and carbon nanotubes” by G A J Amaratunga, M Baxendale, N L Rupesinghe, I Alexandrou, M Chhowalla, T Butler, A I Munindradasa, C J Kiely, L Zhang and T Sakai, New Diamond and Frontier Carbon Technology 9, 31-51 (1999).

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95. “Electronic behavior and field emission of a-C:H:N/Si heterojunctions” by D. A. I. Munindradasa, M. Chhowalla, G. A. J. Amaratunga and S. R. P. Silva, Journal of Non-Crystalline Solids 230, 1106-1112 (1998).

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Robertson, Diamond and Related Materials, Diamond and Related Materials 7, 472-476 (1997).

97. “Influence of reactive gas on ion energy distributions in filtered cathodic vacuum arcs” by M. M. M. Bilek, M. Chhowalla and W. I. Milne, Applied Physics Letters 71, 1777-1779 (1997).

98. “Fullerene and nanoparticle formation in cathodic arc deposition” by M. Chhowalla, D. A. I. Munindradasa and G. A. J. Amaratunga, Applied Physics Letters 70, 3233-3235 (1997).

99. “Generation and deposition of fullerene- and nanotube-rich carbon thin films” by M. Chhowalla, R. A. Aharonov, C. J. Kiely, I. Alexandrou and G. A. J. Amaratunga, Philosophical Magazine Letters 75, 329-335 (1997).

100. “Influence of ion energy and substrate temperature on the optical and electronic properties of tetrahedral amorphous carbon (ta-C) films” by M. Chhowalla, J. Robertson, C. W. Chen, S. R. P. Silva, C. A. Davis, G. A. J. Amaratunga and W. I. Milne, Journal of Applied Physics 81, 139-145 (1997).

101. “Investigation of carbon nitride films by cathodic arc evaporation” by M. Chhowalla, I. Alexandrou, C. J. Kiely, G. A. J. Amaratunga, R. A. Aharonov and R. P. Fontana, Thin Solid Films 291, 103-106 (1996).

102. “The structure of tetrahedral amorphous carbon thin films” by S. R. P. Silva, S. Xu, B. K. Tay, H. S. Tan, H. J. Scheibe, M. Chhowalla and W. I. Milne, Thin Solid Films 291, 317-233 (1996).

103. “Interactions of directed plasma from a cathodic arc with electrodes and magnetic field” by M. M. M. Bilek, D. R. McKenzie, Y. Yin, M. Chhowalla and W. I. Milne, IEEE Transactions on Plasma Science 24, 1291-1298 (1996).

104. “Highly tetrahedral amorphous carbon films with low stress” by M. Chhowalla, Y. Yin, G. A. J. Amaratunga, D. R. McKenzie and Th. Frauenheim, Applied Physics Letters 69, 2344-2346 (1996).

105. “Hard and elastic thin films from interlinking of carbon nanoparticles” by G. A. J. Amaratunga, M. Chhowalla, C. J. Kiely, I. Alexandrou, R. A. Aharonov, R. M. Devenish, Nature 383, 321-323 (1996).

106. “Factors affecting growth defect formation in cathodic arc evaporated coatings” by R. A. Aharonov, M. Chhowalla, S. Dhar and R. P. Fontana, Surface and Coatings Technology 82, 334-343 (1996).

107. “Residual stresses and debonding of diamond films on titanium alloy substrates” by L. Chandra, M. Chhowalla, G. A. J. Amaratunga and T. W. Clyne, Diamond and Related Materials 5, 674-681 (1996).

108. “Amorphous diamond films by enhanced arc evaporation” by B. F. Coll and M. Chhowalla, Surface Coatings and Technology 79, 76-86 (1996).

109. “Stationary carbon cathodic arc – plasma and film characterization” by M. Chhowalla, C. A. Davis, M. Weiler, B. Y. Kleinsorge and G. A. J. Amaratunga, Journal of Applied Physics 79, 2237-2244 (1996).

110. “Ion energy and plasma characterization in a silicon filtered cathodic vacuum arc” by M. M. M. Bilek, M. Chhowalla, M. Weiler and W. I. Milne, Journal of Applied Physics 79, 1287-1291 (1996).

111. “Deposition of smooth tetrahedral amorphous carbon thin films using cathodic arc without a macroparticle filter” by M. Chhowalla, M. Weiler, C. A. Davis, B. Y. Kleinsorge and G. A. J. Amaratunga, Applied Physics Letters 67, 131-140 (1994).

112. “Modelization of reaction kinetics of nitrogen and titanium during TiN arc deposition” by B. F. Coll and M. Chhowalla, Surface and Coatings Technology 68, 131-140, (1994).

List of Invited Talks:

1. “Solution processable graphene for large area electronics” Materials Research Society Fall Meeting, Boston, MA, November 28 – December 2, 2011.
2. “Low power graphene based flexible electronics” Materials Research Society Fall Meeting, Boston, MA, November 28 – December 2, 2011.
3. “Graphene and related materials” Specialist Meeting on Carbons 2011, Puerto Vallarta, Jalisco, Mexico, 25th to 28th of September, 2011.
4. “Graphene derivatives for large area electronics” International Conference on Diamond and Related Materials 2011, Garmisch-Partenkirchen, Bavaria, Germany, September 4 – 8, 2011.
5. “Tutorial on graphene” 2011 PCAM Summer School "Electronic and Optical Properties of Nanoscale Materials" San Sebastian, Spain, July 4 – 7, 2011.
6. “Large area electronics with graphene oxide” International Conference on Materials and Advanced Technologies, Singapore, June 26 – July 1, 2011.
7. “Graphene oxide electronics” The 4th IEEE International Conference on Nanoelectronics June 21 – 24, Tao – Yuan, Taiwan (did not attend).
8. “Progress on graphene oxide electronics” Seminar at Rensellaer Polytechnic Institute, Troy, NY, May 5, 2011.
9. “Graphene oxide electrodes for large area electronics” Nature Conference on Graphene: The Road to Applications, Boston, MA, May 11 – 13, 2011.
10. “Review and state-of-the-art of graphene oxide” International Conference on Metallurgical Coatings and Thin Films (ICMCTF 2011), San Diego, CA, May 2 – 6, 2011.
11. “Shedding new light on graphene oxide: Chemical structure, infrared, and optical properties” Graphene Symposium, Materials Research Society Spring Meeting 2011, San Francisco, April 25 – 29 (2011).
12. Keynote Presentation “Opto-electronic properties of graphene oxide” Graphene Week 2011, Part of Imagine Nano Conference, Bilbao, Spain, April 11 – 14, 2011.
13. Keynote Presentation “Solution processable graphene oxide and partially oxidized graphene for opto-electronics” New York Chapter of the American Physical Society, College of Nanoscale Science & Engineering, University at Albany – SUNY, Albany, NY, April 8-9, 2011.
14. “Opto-electronic properties of graphene derivatives” Seminar at William Patterson University, Wayne, NJ, March 24, 2011.
15. “Graphene derivatives for optical and electronic applications” Seminar at Case Western Reserve University, Cleveland, Ohio, February 24, 2011.
16. “Optical properties of chemically derived graphene oxide” IX Brazilian Materials

Research Society Meeting, Ouro Preto, Minais Gerais, October 24 – 28, 2010.

17. “Solution processable graphene derivatives for flexible electronics” *“ NSF Workshop on Technological Challenges for Hybrid Flexible Electronics and Photonics”,* October 25-26, 2010, in Arlington, VA, USA.
18. “Opto-electronic properties of graphene oxide” 15th International Metallurgy and Materials Congress, Istanbul, Turkey, November 11 – 13, 2010.
19. "Tunable Photoluminescence from Chemically Derived Graphene", Graphene: Chemical Reaction Session at the American Vacuum Society’s 57th International Symposium & Exhibition, Albuquerque, NM, October 17 - 22, 2010.
20. “Chemically derived graphene for large area opto-electronics”, NanoCarbon 2010, International Symposium on Nanotubes and Related Materials, October 14 – 16, 2010, Nanjing, P. R. China.
21. “Synthesis of nanostructured materials”, Centre for Advanced Structural Ceramics (CASC) Annual Summer School, Imperial College London, London, UK. September 14 – 16, 2010.
22. “Making graphene luminescent”, Focused Meeting on Recent Advances in Graphene and Related Materials”, August 1-6, 2010, Singapore.
23. “Tunable photoluminescence from chemically derived graphene oxide”, ChemOnTubes 2010, International Conference on Chemistry of Nanotubes and Graphene, April 11 – 15, Arachon, France.
24. “Blue photoluminescence from chemically derived graphene”, London Centre for Nanotechnology Seminar Series, University College London, March 10, 2010.
25. “Large area electronics with chemically derived graphene”, 3rd Cambridge CNT Symposium, St. John’s College, Cambridge 13th November 2009.
26. “Electronic transport in single layered graphene oxide”, Experimental Solid State Physics Lecture Series, Imperial College London, November 8, 2009.
27. “Large area electronics with solution processable graphene”, CAPE-CIKC Advanced Technology Lecture Series, Center for Advanced Photonics and Electronics at the University of Cambridge, October 16, 2009.
28. “Solution-processed Transparent and Conducting Single Walled Carbon Nanotube and Graphene Thin Films”, ICMAT 2009 & IUMRS – ICA 2009, Singapore 28 June – 3 July 2009.
29. Plenary Lecture, “Solution processed transparent and conducting graphene thin films for large area electronics”, 5th Nanoscience and Nanotechnology Conference (NanoTR5), Anadolu University, Eskisehir, Turkey June 08-12, 2009.
30. “Solution processed transparent and conducting graphene thin films for large area electronics”, Abo Akademie Lecture Series, Abo, Finland, June 15, 2009.
31. “Graphene based thin films for transparent and flexible electronics”, Printed Electronics Europe 2009, Dresden, Germany, 8th of April 2009.
32. “Graphene oxide transparent conductors”, International Workshop on Glass for Harvesting, Storage and Efficient Usage of Solar Energy, Pittsburgh, PA, USA November 16 - 18, 2008.
33. “Transparent and conducting solution processable graphene thin films for large area

electronics", 2nd International Symposium on Transparent and Conducting Oxides (IS-TCO 2008), Hersonissos, Crete, Greece, 22 - 26 October, 2008

34. "Graphene-Based Thin Films for Transparent and Flexible Electronics", Printed Electronics USA 2008, San Jose, CA, USA, 2-5th Dec, 2008.
35. "Graphene thin films from solution" 55th International Symposium of the American Vacuum Society, Boston, MA, USA, October 19-24, 2008.
36. "Single walled carbon nanotube thin films as hole collecting electrodes in organic photovoltaics" SPIE Solar Energy and Applications 2008, San Diego, CA, USA, Aug 10 – 14, 2008.
37. "Solution processed graphene thin films for opto-electronics" 1st International Conference from Nanoparticles and Nanomaterials to Nanodevices and Nanosystems (IC4N), June 16 – 18, 2008.
38. "Organic Memory Devices from C_{60} molecules and insulating polymers" The 3rd International Conference "Smart Materials, Structures and Systems" Sicily, Italy, June 8 to 13, 2008.
39. "Solution processed single walled nanotube thin films for organic photovoltaics" 213th ECS Meeting. Phoenix, Arizona, May 18-23, 2008.
40. "Opto-electronic properties of solution process single walled carbon nanotube networks and graphene thin films" The 2nd International Conference on New Diamond and Nano Carbon, Taipei, Taiwan, May 26-29, 2008.
41. "Solution processed single walled carbon nanotube and graphene thin films" MRS Spring 2008, San Francisco, CA, USA, March 9 – 13, 2008.
42. "Solution processed single walled carbon nanotube and graphene thin films" TMS 2008, New Orleans, LA, USA, March 24 – 28, 2008.
43. "Basics of making thin films with carbon nanotubes" Mechanical Engineering Honors Seminar Series at The Stevens Institute of Technology, Hoboken NJ, USA, Feb 7, 2008.
44. "Intertube processes in networks of carbon nanotubes: opto-electronic properties, Raman, and organic photovolatics" Summer School on Nanostructured Materials, University of Santa Maria, Valparaiso, Chile, Jan 13 – 16, 2008.
45. Plenary Lecture, "Single walled carbon nanotube thin films for flexible electronics" 2007 International Symposium on Advanced Nanomaterials - *Electronic Devices and Materials."* Suwon, South Korea, Nov. 4 – 5, 2007.
46. "Solution processed single walled carbon nanotube thin films" First NANO Forum on Carbon Nanotube Based Transparent Conducting Films and Thin Film Transistors, Jeonju, South Korea, Oct. 31 – Nov. 3, 2007.
47. Plenary Lecture, "Single walled carbon nanotube thin films", International Materials Congress, MATERIALA 2007, Morelia, Mexico, Oct. 7 – 12, 2007.
48. "Thin films of carbon nanotubes for opto-electronic applications" ISOPE 2007, Lisbon, Portugal, July 2 – 6, 2007.
49. "Single walled carbon nanotube thin films for flexible electronics" International Workshop on Advanced Materials and Technologies for Nano and Oxide Electronics (AMTNOE 2007), February 19 – 22, 2007, New Delhi, India.

50. “Transparent and (semi)conducting single walled carbon nanotube thin films” Distinguished Lecturer at the Winter School for Carbon Nanotubes at Sungkyunkwan University, Suwon, South Korea, February 12 – 15 (2007).
51. “Thin films of single wall carbon nanotubes for electronic applications” NSF PASI Summer School on Novel Materials for Micro and Nano-electronics, Renaca, Chile, January 8 – 18 (2007).
52. “Single wall carbon nanotube thin films” Manish Chhowalla, Seminar at Columbia University, New York, NY, November 17, (2006).
53. “Comparison of electrical properties of doped and undoped single wall carbon nanotubes” Manish Chhowalla, Seminar at the Rochester Institute of Technology, Rochester, New York, November 1, (2006).
54. “As purified and brominated single wall carbon nanotube thin films for flexible electronics” Manish Chhowalla, Seminar at Rensselaer Polytechnic Institute, Troy, NY, September 27, (2006).
55. “Carbon nanotube thin films for flexible electronics” Manish Chhowalla, Seminar at Hanyang University, Seoul, Korea, September 5, (2006).
56. “Vertically aligned carbon nanotubes for field emission” Manish Chhowalla, Seminar at Korean Institute of Science and Technology, Seoul, Korea, September 6, (2006).
57. “Organic Memory Devices from C60 molecules dispersed in insulating polymers” Manish Chhowalla, Seminar at Samsung Advance Institute of Technology (SAIT), Suwon, Korea, September 7 (2006).
58. “Carbon nanotube spintronics and electronics” Manish Chhowalla, Seminar at Materials Science and Engineering Department, University of Cambridge, Cambridge, UK, July 26 (2006).
59. “Single wall carbon nanotubes applications and devices” Manish Chhowalla, Seminar at the Center for Advanced Photonics and Electronics (CAPE), University of Cambridge, Cambridge, UK, July 22 (2006).
60. “Brominated SWNTs for high performance flexible thin film transistors” Manish Chhowalla, Seminar at Sungkyunkwan University, Suwon, Korea, September 8 (2006).
61. “Synthesis of nanostructures by arc discharge in water” Manish Chhowalla, Seminar at Himeji Institute of Technology, Himeji, Japan, January 20 (2006).
62. “Carbon nanotube thin films” Manish Chhowalla, Seminar at Nanyang Technical University, Singapore, January 12 (2006).
63. “Thin films of single wall carbon nanotubes for electronic applications” Manish Chhowalla, Nano Singapore 2006, January 10 – 14, Singapore, (2006).
64. “Growth and Applications of Carbon Nanotubes” Manish Chhowalla, Materials Research Society Spring Meeting, Manish Chhowalla, San Francisco, CA March 28 – April 1, (2005).
65. “Growth and applications of single wall carbon nanotubes” Manish Chhowalla, The First International Conference on One Dimensional Nano-Materials (ICON), Taipei, Taiwan January 10 – 14 (2005).
66. “Device applications of carbon nanotubes” Manish Chhowalla, Seminar at the University of Surrey, Electrical Engineering and Electronics Department (Advanced Devices Institute), Surrey, UK, November 4 (2004).

67. “Growth and Applications of Carbon Nanotubes” Manish Chhowalla, Summer School at the Instituto de Investigaciones en Materiales, Universidad Nacional Autonoma de Mexico, Mexico City, Mexico June 21 – 25 (2004).
68. “Synthesis of novel nanostructures using the submerged arc” Manish Chhowalla International Conference on Metallurgical Coatings and Thin Films (ICMCTF 2004), San Diego, CA April 19 – 24 (2004).
69. “Carbon nanotubes, nano-onions and nanohorns” Manish Chhowalla Seminar at the University of Virginia, Applied Physics Department, Charlottesville, VA March 15 (2004).
70. “Synthesis and applications of carbon nanostructures” Manish Chhowalla, Seminar at the New Jersey Institute of Technology (NJIT), Chemistry Department, February 10, 2004.
71. “Carbon nanotubes and onions”, Manish Chhowalla, American Ceramic Society Annual Meeting, Nashville, TN USA, April 28 – 30 (2003).
72. “Electrons in Nanotubes” Manish Chhowalla, Royal Academy of Engineering Feature Presentation, London, UK October 11 (2002).
73. “Growth and field emission properties of aligned carbon nanotubes” Manish Chhowalla, 7th Workshop on the Surface and Bulk Defects in CVD Diamond Films, Hasselt, Belgium March 13 – 15 (2002).
74. “Fabrication of Novel Nano-Materials using chemical vapor deposition and liquid arc discharge” Manish Chhowalla, GEM 12 (The Twelfth Gaseous Electronics Meeting, International Workshop on Plasma Processing), Murruramurang Resort, New South Wales, Australia February 3 – 6 (2002).
75. “Cold cathode emission from vertically aligned carbon nanotubes” Manish Chhowalla, Toshiba Corporation Research Laboratories, Yokohama, Japan February 8 (2002).
76. “Growth and characterization of vertically aligned carbon nanotubes” Manish Chhowalla, Nanotec 2001 (Nano-technology in Carbon and Related Materials), University of Sussex and Brighton, UK, August 29 – September 1 (2001).
77. “Diamond like carbon: a cut throat business” Manish Chhowalla, Diamond 2000 (11th European Conference on Diamond, Diamond-like carbon, Nanotubes, Nitrides and SiC), Porto, Portugal, September 3 – 8 (2000).
78. “Synthesis of nanostructured (Fullerene-like Carbon) by arc discharge” Manish Chhowalla, International School of Solid State Physics: 18th Course on Nanostructured Carbon for Advanced Applications, Erice, Sicily, July 19 – 31 (2000).
79. “Cathodic arc coatings for mass produced items” Manish Chhowalla, 2000 Society of Vacuum Coaters (SVC) Conference, Denver, CO, April 24 – 28 (2000).
80. “Carbon thin films from cathodic arc plasmas” Manish Chhowalla, International Conference on Metallurgical Coatings and Thin Films (ICMCTF ’99), San Diego, CA April 25 – 30 (1999).
81. “AlTiN thin films by cathodic arc evaporation” Manish Chhowalla, Multi – Arc Licensing Technology and Engineering Conference (MALTEC 1998), Amsterdam, Netherlands, January 13 – 18 (1998).