

## **Reference :**

1. J. J. Summer, S. E. Creager, J. J. Ma, and D. D. DesMarteau, J.Electrochem. Soc., 145, 107 (1998).
2. J. Kiman, News week 54B, October 23 (2000).
3. H. Voss and J. Huff, J. Power Sources, 65, 155 (1997).
4. Bolmen, J. M. J. Leo, and M. N. Megerwa, "Fuel cell systems,"Plenum Press, New York and London, (1993).
5. M. Wakizoe, O. A. Velev, and S. Srinivasan, Electrochimica Acta, 40,335 (1995).
6. J. H. Hirschenhofer, D. B. Stauffer, R. R. Engleman, and M. G. Klett, "Fuel Cell Handbook," U.S. Department of Energy, Federal Energy Technology Center, (2000).
8. H. W. Kroto, J. R. Heath, S. C. O'Brien, R.F. Curl, and R. E. Smally, Nature 318, 162 (1985).
9. S. Iijima, Helical microtubules of graphitic carbon, Nature 354, 56 (1991).
10. A. Thess, R. Lee, P.Nikolaev, H. Dai, P. Petit, J. Robert, C. Xu, Y. J. Lee, S. G. Kim, A. G. Rinzler, D. T. Colbert, G. E. Scuseria, D. Tomanek, J. E. Fischer, R. E. Smally, Crystalline ropes of metallic carbon nanotubes, Science 273, 483 (1996).
11. M. A. Kastner, Artificial atoms, Phys. Today. 46, 24 (1993).
12. L. N. Lewis, Chemical catalysis by colloids and clusters, Chem.Rev. 93, 2693 (1993).
13. R. Freer. Nanoceramics, London, Institute of Materials (1993).
14. N. M. Rodriguez, A. Chamners, R. T. K. Baker, Catalytic engineering of carbon nanostructures, Langmuir 11, 3862 (1995).
15. S. Hill, Green cars go farther with graphite, New Sci. 152, 20 (1996).
16. Special issue of Nature, 406, 1021 (2000).
17. J. W. Mintmire, B. I. Dunlap, C. T. White, Are fullerene tubules metallic?, J. Phys. Rev.

- Lett. 68, 631 (1992).
18. N. Hamada, S. Sawada, A. Oshiyama, New one-dimensional conductors: Graphitic microtubules, J. Phys. Rev. Lett. 68, 1579 (1992).
19. J. Tersoff, R. S. Ruoff , Structural Properties of a Carbon-Nanotube Crystal, J. Phys. Rev. Lett. 73, 676 (1994).
20. P. Kim, L. Shi, A. Majumdar, P. L. McEuen, Thermal Transport Measurements of Individual Multiwalled Nanotubes, Phys. Rev. Lett. 87, 215502 (2001).
21. G. Gao, T. Cagin, W. A. Goddard, Energetics, structure, mechanical and vibrational properties of single-walled carbon nanotubes, Nanotechnology 9, 184 (1998).
22. N.M. Rodriguez, M.S. Kim, R.T.K. Baker, J. Phys. Chem. 98 (1994) 13108.
23. R.T.K. Baker, K. Laubernds, A.Wootsch, Z. Paal, J. Catal. 193 (2000)165.
24. C.A. Bessel, K. Laubernds, N.M. Rodriguez, R.T.K. Baker, J. Phys. Chem. B 105 (2001) 1115.
25. E.S. Steigerwalt, G.A. Deluga, D.E. Cliffel, C.M. Lukehart, J. Phys.Chem. B 105 (2001) 8097.
26. T. K. Baker, J. J. Chludzinski, Jr, J. Catal. 1980, 64, 464.
27. S. Amelinckx, X. B. Zhang, D. Bernaerts, X. F. Zhang, V. Ivanov, J. B.Nagy, Nature 1994, 265, 635.
28. K. Hernadi, A. Forseca, J. B. Nagy, D. Bernaerts, A. A. Lucas, Carbon 1996, 34, 1249.
29. W. Li, S. Xie, W. Liu, R. Zhao, Y. Zhang, W. Zhou, G. Wang, L. Qian, J. Mater. Sci. 1999, 34, 2745.
30. J. M. Mao, S. S. Xie, J. Mater. Sci. Lett. 1999, 18, 1151.

31. F. Casar, J.-O. Bovin, L. R. Wallenberg, G. Karlsson, L. K. L. Falk, T. Oku, *J. Mater. Res.* 2000, 15, 1857.
32. H. Takigawa, M. Yatsuki, R. Miyano, M. Nagayama, T. Sakakibara, S. Itoh, Y. Ando, *Jpn. J. Appl. Phys.* 2000, 39, 5177.
33. M. Zhang, Y. Nakayama, L. Pan, *Jpn. J. Appl. Phys.* 2000, 39, L1242.
34. L. Pan, T. Hayashida, M. Zhang, Y. Nakayama, *Jpn. J. Appl. Phys.* 2001, 40, L235.
35. Y. Ando, X. Zhao, M. Ohkohchi, *Carbon* 35 (1997) 153.
36. C. Liu, Y.Y. Fan, M. Liu, H.T. Cong, H.M. Cheng, M.S. Dresselhaus, *Science* 286 (1999) 1127.
37. A. Chambers, C. Park, R.T.K. Baker, N.M. Rodriguez, *J. Phys. Chem. B* 122 (1998) 4253.
38. K. Broka, P. Ekdunge, *J. Appl. Electrochem.*, 27, 117 (1997).
39. V. A. Paganin, T. J. Freire, E. A. Ticianelli, and E. R. Gonzalez, *Rev. Sci. Instrum.*, 68, 3540 (1997).
40. S. Malhotra and R. Datta, *J. Electrochem. Soc.*, 144, L23 (1997).
41. Y. S. Hsu, C. S. Hsu and Y. C. Chen, *Proc. 3rd Inter. Fuel Cell Conference*, 503 (1999).
42. D. Robertson, *Carbon* 8, 365 (1970).
43. T. Baird, J. R. Frayer, B. Grant, *Structure of fibrous carbon*, *Nature* 233, 329 (1971).
44. M. J. Yacaman, M. M. Yoshida, L. Rendon, J. G. Santiesteben, *Catalytic growth of carbon microtubules with fullerene structure*, *Appl. Phys. Lett.* 62, 202 (1993).
45. Y. Chen, Z. L. Wang, J. S. Yin, D. J. Johnson, R. H. Prince, *Well-aligned graphitic nanofibers synthesized by plasma-assisted chemical vapor deposition*, *Chem. Phys. Lett.*

272, 178 (1997).

46. L. C. Qin, D. Zhou, A. R. Krauss, D. M. Gruen, Growing carbon nanotubes by microwave plasma-enhanced chemical vapor deposition, *Appl. Phys. Lett.* 72, 3437 (1998).
47. C. Laurent, E. Flahaut, A Peigney, A. Rousset, Metal nanoparticles for the catalytic synthesis of carbon nanotubes, *New J. Chem.* 1229 (1998).
48. C. F. Chen, C. L. Tsai, C. L. Lin, Characterization of phosphorus-doped and boron-doped diamond-like carbon emitter arrays, *J. Appl. Phys.* 90, 4847 (2001).
49. A. Gorbunov, O. Jost, W. Pompe, A. Graff, Solid–liquid–solid growth mechanism of single-wall carbon nanotubes, *Carbon* 40, 113 (2002).
50. R. S. Wagner and W. C. Ellis, Vapor-liquid-solid mechanism of single crystal growth, *Appl. Phys. Lett.* 4, 89 (1964).
51. Tibbetts GG. Why are carbon filaments tubular, *J. Cryst. Growth* 66, 632 (1984).
52. Y. Saito, et al., *Chem. Phys. Lett.* 204, 277 (1993).
53. Saito Y., Nanoparticles and filled nanocapsules. *Carbon* 33, 979 (1995).
54. T. J. Trentler, K. M. Hickman, S. C. Goel, A. M. Viano, P. C. Gibbons, W. E. Buhro, Solution-Liquid-Solid growth of crystalline III-V semiconductors: an analogy to Vapor-Liquid-Solid growth, *Science* 270, 1791 (1995).
55. T. J. Trentler, K. M. Hickman, S. C. Goel, A. M. Viano, P. C. Gibbons, W. E. Buhro, M. Y. Chiang, A. M. Beatty, *J. Am. Chem. Soc.* 119, 2172 (1997).
56. Alfred Grill, *Cold Plasma in Materials Fabrication*. New York (1993)
57. D. A. Carl, D. W. Hess, M. A. Lieberman, T. D. Nguyen, R. Gronsky, Effects of dc bias on the kinetics and electrical properties of silicon dioxide grown in an electron cyclotron

- resonance plasma, J. Appl. Phys. 70, 3301 (1991).
- 58 汪建民, 材料分析, 中國材料學會, 台灣新竹 (1998).
59. S. Yugo, T. Kanai, T. Kimura, and T. Muto, Appl. Phys. Lett. 58, 1036 (1991).
- 60 J. T. Huang, W. Y. Yeh, J. Hwang, and H. Chang, Thin Solid Films 315, 35 (1998).
- 61 R. Stoćkel, K. Janischowsky, S. Rohmfeld, J. Ristein, M. Hundhausen, and L. Ley, Diamond Relat. Mater. 5, 321 (1996)
62. By Chihiro Kuzuya, Wan In-Hwang, Shinji Hirako, Yukio Hishikawa, and Seiji Motojima, Chem. Vap. Deposition 2002, 8, No. 2
63. G. Vitali, M. Rossi, M. L. Terranova, and V. Sessa, J. Appl. Phys. 77, 4307 (1995).
64. D. G. McCulloch, S. Prawer, and A. Hoffman, Phys. Rev. B 50, 5905 (1994).
65. V. Barbarossa, F. Galluzzi, R. Tomaciello, and A. Zanobi, Chem. Phys Lett. 185, 53 (1991).
66. F. Tuinstra and J. L. Koenig, J. Chem. Phys. 53, 1126 (1970).
67. A.J. Bard, L.R. Faulkner, Electrochemical Methods, 2nd (Chapter 13), Wiley, New York, 2001.
68. M. Watanabe, K. Makita, H. Usami, S. Motoo, J. Electroanal. Chem. 197 (1986) 195.
69. J.F. Llopis, F. Colom, in: A.J. Bard (Ed.), Encyclopedia of Electrochemistry of the Elements, vol. 6, Marcel Dekker, New York, 1976, pp. 208–213.
70. Y. Takasu, Y. Fujii, K. Yasuda, Y. Iwanaga, Electrochim. Acta 34 (1989) 453.
71. P.A. Attwood, B.D. McNicol, R.T. Short, J. Appl. Electrochem. 10 (1980) 213.
72. M. Pauckert, T. Yoneda, R.A. Betta, M. Boudart, J. Electrochem. Soc. 133 (1986) 944.
73. S. Mukerjee, J. Appl. Electrochem. 20 (1990) 537.
- 74 P.L. Antonucci, V. Alderucci, N. Giordano, D.L. Cocke, H. Kim, J. Appl. Electrochem. 24

(1994) 58.

75. T. Frelink, W. Visscher, J.A.R. van Veen, J. Electroanal. Chem. 382 (1995) 65.

