

## 8. REFERÊNCIAS BIBLIOGRÁFICAS.

- 1 The Royal Society & The royal Academy of Engineering, *Nanoscience and Nanotechnology*, (2004). Disponível em:  
<http://royalsociety.org/landing.asp?id=1210>  
Acessado em 15/01/2008. 1.1.
- 2 Tito Trindade. Revista “*Ciencia hoje*”. Ciencia Tecnología e Empreendedorismo. Disponível em:  
<http://www.cienciahoje.pt/index.php?oid=9488&op=all>  
Acessado em 15/01/2008. 1.1.
- 3 Iijima, S. Helical microtubes of graphitic carbon, *Nature* **56**,354 (1991). 1.2, 1.2.3.
- 4 Krishnan, A. et al. Young modulus of single- walled nanotubos, *Physical Review B* **58**, 14013 (1998). 1.2.
- 5 Duesberg, G. et al. Ways towards the scaleable integration of carbon nanotubes into silicon based technology, *Diamond and related Materials* **13**, 354 (2006). 1.2.
- 6 Computer Desktop Encyclopedia. The computer language Company Inc. Disponível em:  
[http://content.answers.com/main/content/img/CDE/\\_CNTUBE.GIF](http://content.answers.com/main/content/img/CDE/_CNTUBE.GIF)  
Acessado em 18/01/2008. 1.2.
- 7 K.Hata, N. et al. Water-assisted highly efficient synthesis of impurity- free single walled carbon nanotubos, *Science* **306**,1362-1364, (2004). 1.2.1.
- 8 Barry J. Bauer. SANS of labeled SWCNT Dispersions and clusters. Disponível em:  
<http://polymers.nist.gov/researcharea/processing/image05/SANS4-t.gif>  
Acessado em 18/01/2008. 1.2.1.
- 9 G-Y. Xiong, D.Z. Wang, and Z.F. Ren. Aligned millimeter-long carbon nanotube arrays grown on single crystal magnesia, *Carbon* **44**, 969-973, (2006). 1.2.2.

- 10 Carbon nanotubos (Research grade, high purity), Nano Lab. Disponível em: <http://lib.store.yahoo.net/lib/nanolab2000/nanotube3.gif>  
Acessado em 18/01/08. 1.2.2.
- 11 M. Endo, K. et al. The production and structure of pyrolytic carbon nanotubos (PCNTs). *Journal of physics and Chemistry of Solids* **54**,1841 (1993). 1.2.3.
- 12 Villalpando-Paez, F. et al. Synthesis and characterization of long strands of nitrogen doped single-walled carbon nanotubos, *Chemical physic letters* **424**, 345 (2006). 1.2.3, 1.2.4.
- 13 *1.1.Métodos de crescimento de nanotubos de Carbono. Nanotubos, Nanofibras e Fullerenos. Disponível em:*  
<http://www.oviedo.es/personales/carbon/nanotubos/modelo%20de%20Bake r.jpg>  
Acessado em 18/08/2008. 1.2.4.
- 14 E. Dujardin, et al. Capillarity and wetting of carbon nanotubos, *Science* **265**, 1850-1852 (1994). 1.2.5.
- 15 Curtin, William A. et al. CNT – Reinforced ceramics and metals. *Materialstoday*, 44-49, November (2004). 1.4.1, 4.1.
- 16 T. Kuzumaki, et al. Mechanical characterisitcs and preparation of carbon nanotube fiber-reinforced Ti composite, *Advanced Engineering Materials* **2**, 416-418(2004). 1.4.2.
- 17 X.Chen, et al. Carbon nanotube metal-matrix composites prepared by eletroless plating, *Composites Science and Technology* **60**, 301-306(2000). 1.4.2.
- 18 Cornelia Otto. Synthesis and Characterization of CNT Reinforced Copper Thin Films. Dissertation Stuttgart University. Bericht Nr. **194** November (2006). 1.4.2, 1.5, 1.5.1, 4.5.
- 19 C. Thaw et al. Metal- Matrix Composites. *Sampe* **23**, 40-43 (1987). 1.4.2.
- 20 Chung, Deborah, Carbon Fiber Compósitos, Chapter 5. Butterworth-heinemann, Washington (1994). 1.4.2.
- 21 Buckley, John and Edie, Dan. Carbon-Carbon, Chapter 7,8,*Materials and Composites*, Noyes Publications, N.J. (1993). 1.4.2, 4.1.
- 22 William A. Curtin and Brian W. Sheldon. *Materialstoday*, 44-49 November (2004). 1.4.2, 4.1.
- 23 Faming Du, Karen I Winey, Nanotubes in Multifunctional Polymer composites. Department of Materials Science of Pennsylvania

- 24 Kin-tak Lau. Interfacial bonding characteristics of nanotube/polymer composites, *Chemical Physics letters* **370**, 399-405(2003). 1.4.3.
- 25 S.R.Dong, J.P. Tu, X.B. Zhang. Na Investigation of sliding wear behavior of Cu-matrix composite reinforced by carbon nanotubos, *Materials Science & Engineering A* **313**, 83-87(2001). 1.5.1, 4.3.
- 26 J.P.Tu, et al. Tribological properties of carbon nanotube reinforced copper composites, *Tribological letters* **10**, No 4, 225-228 (2001). 1.5.1, 4.3.
- 27 Chunnian He, et al. Synthesis of binary and triple carbon naotubes over Ni/Cu/Al<sub>2</sub>O<sub>3</sub> catalyst by chemical vapor deposition, *Materials letters* **61**, 4940-4943 (2007). 1.5.1.
- 28 P. Quang, et al. Consolidation of 1% carbon nanotube reinforced metal matrix nanocomposites via equal channel angular pressing, *Journal of materials processing Technology* **187-188**, 318-320 (2007). 1.5.1.
- 29 Yan-Hui Li, et al. Cu/Single-walled carbon nanotube laminate composites fabricated by cold rolling and annealing, *Nanotechnology* **18**, 6pp (2007). 1.5.1.
- 30 Brocchi, E. et al. Alternative chemical-based synthesis routes and characterization of nano-scale particles, *Materials Science and Engineering B* **112**, p200 (2004). 1.5.1.
- 31 P. Ayala, et al. Decorating carbon nanotubes with nanostructured nickel particles via chemical methods, *Chemical Physics Letters* **431**, 104-109 (2006). 1.5.1.
- 32 Hua-Qiang Wu, et al. Preparation of Fe-Ni alloy nanoparticles inside carbon nanotubes via wet chemistry, *Journal of Materials Quemistry* **12**, 1919-1921 (2002). 1.5.1, 4.1.
- 33 Cs. Balázsi, et al. Preparation and characterization of carbon nanotube reinforced silicon nitride composites, *Materials Science and Engineering C* **23**, 1133-1137(2003). 1.5.1.
- 34 Kyung Tae Kim, et al. Microstructures and tensile behavior of carbon nanotube reinforced Cu matrix nanocompósitos, *Materials science and engineering A* **430**, 27-33(2006). 1.5.1, 4.2. 4.3.
- 35 Kyung Tae Kim, et al. Hardness and wear resistance of carbon nanotube reinforced Cu matrix nanocomposites. *Materials science & Engineering A* **449-451**, 46-50(2007). 1.5.1, 4.2.4.3.
- 36 Longshan Xu, et al. Electrostatic-assembly carbon nanotube-implanted copper composite spheres, *Nanotechnology* **18**, 1-4 (2007). 1.5.1.
- 37 Cailu Xu, et al. Preparation of copper nanoparticles on carbon nanotubes plating method, *Materials Research* **39**, 1499-1505 (2004). 1.5.1, 4.4.

- 38 Y.L. yang, et al. Single-walled carbon nanotube-reinforced copper composite coatings prepared by electrodeposition under ultrasonic field, *Materials letters* **62**, 47-50(2008). 1.5.1, 4.1. 4.4.
- 39 X.Y.Tao, et al. Synthesis and characterization of Cu filled carbon nanohorns, *Materials Chemistry and Physics* **104**, 210-214 (2007). 1.5.2.
- 40 Roduit. B, et al. Influence of experimental conditions on the kinetic parameters of gas-solid reactions: parametric sensitivity of thermal analysis, *Thermochimica Acta* **282**, 101-119 (1996). 2.3, 4.5.
- 41 Levenspiel. O. Engenharia das reações químicas. Ed Blücher. 2ed. Vol**22**, 572p (1983). 2.3, 4.1.
- 42 Hotza, D. Produção de cobalto via redução de  $\text{Co}_3\text{O}_4$  por hidrogeno em leito fluidizado. Dissertação de mestrado. Universidade de Santa Catarina, 159p (1991). 2.3.
- 43 Macedo.D. Obtenção por redução pelo hidrogênio e caracterização da liga Ni-Co. Dissertação de mestrado. PUC-Rio, 78p (2005). 2.3
- 44 Copper powder consolidation techniques. Compaction, Solid state sintering, liquid phase sintering. Disponível em:  
<http://www.copper.org>  
Acessado em 15/2/2008. 2.4.
- 45 Costa Celio. Sinterização. Departamento de Engenharia Metalúrgica. UFRJ, Apresentação Power Point, (Document) , Março (2008). 2.4, 4.3.
- 46 D.Williams & C.B. Carter. Transmission Electron Microscopy. Kluwer Academic/Plenum Publishers (1997). 2.5.
- 47 J.W. Edington. Practical Electron Microscopy in materials Science. Philips Corporation, Eindhoven (1976). 2.5.
- 48 FEI Company. Tools for Nanotech. Disponível em:  
<http://www.fei.com/products/types/transmission-electron-microscope.aspx>  
Acessado em 14/02/2008, 2.5.
- 49 William Boltom. Electrical and electronic measurement and testing. Puente doble de Kelvin. Disponível em:  
<http://web.frm.utn.edu.ar/medidase1/teoria/Unidad%207-ver1.pdf>  
Accesado em 15/02/08. 2.6.
- 50 M.Rester, et al. Microstructural investigation of the volume beneath nanoindentations in copper, *Acta Materialia* **55**, 6427-6435(2007). 2.7.
- 51 X.H. Liu, et al. Anisotropy in homogeneous dislocation nucleation by nanoindentation of single crystal Cu, *Scripta Materialia* **58**, 564-567 (2008). 2.7.

- 52 Gómez Maryory. Caracterización de las propiedades tribológicas de los recubrimientos duros. Memoria de doctorado. Capítulo 3. (2005). 2.7.
- 53 S.Bansal, et al. Nanoindentation of single crystal and polycrystalline copper nanowires, *Electronic components and technology conference* **55**, 2005. Disponível em:  
[http://ieeexplore.ieee.org/xpls/abs\\_all.jsp?arnumber=1441248](http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=1441248)  
Acessado em 10/07/2008. 2.7.
- 54 Motta. Marcelo S. Síntese por redução in-situ e caracterização microestrutural dos nano-compósitos de Cu-Al<sub>2</sub>O<sub>3</sub> e Ni-Al<sub>2</sub>O<sub>3</sub>. Tese de doutorado. PUC-Rio.103p (2002). 3.1.2, 4.2.
- 55 W. M. Keely and Harry W. Maynor. Thermal studies of nickel, cobalt, iron, and copper oxides and nitrates, *Journal of chemical and engineering* **8**, 297-300(1962). 4.1.
- 56 Avalo Orfelinda. Síntese e Caracterização de ligas Fe-Ni nanoestruturadas de. Tese de doutorado. PUC-Rio, 102p (2008). 4.1.
- 57 Paola Ayala. Efeitos de fonte precursora no controle da dopagem e ambiente químico em nanotubos de carbono dopados com nitrogênio. Tese de doutorado PUC-Rio. 126p (2007). 2.5, 4.1.
- 58 Vladimir Lavayen. Non-Carbonaceous Nanostructures vs Carbon nanotubes: How the Defects Should Identified and Understand. In Tercer Simposio Internacional em materiais Avanzados e Nano estruturas. Aneis Reñaca Chile. Maio de 2008. 4.1.
- 59 K. Lemus-Quiroz. , Z. López-Cabaña, E. Benavente, G. González-Moraga. Lamellar Organic-Inorganic Nanocomposites based on ZnO-Surfactant. In Tercer Simposio Internacional em materiais Avanzados e Nano estruturas. Aneis Reñaca Chile. Maio de 2008. 4.1.
- 60 W. Cañon, D. Venegas, J. Manzur, S. Álvarez. Electrochemical Behavior of Copper Complexes with Substituted Polipyridinic Ligands. An Experimental and Theoretical Study. In International Workshop Frontiers in materiais Research IV. Aneis Viña del Mar Chile. Maio de 2008. 4.1.
- 61 Sung-Tag Oha and Se-Joong Yoon. Hydrogen reduction and sintering behavior of Al<sub>2</sub>O<sub>3</sub>/CuO powder mixtures prepared from different raw powders, *Key Engineering Materials* **317-318**, 181-184(2006). 4.2.
- 62 Jae Y Kim, et al. Reaction of CuO with hydrogen studied by using synchrotron-based x-ray diffraction, *Journal of physics condensed matter* **16**, 3479–3484(2004). 4.2.
- 63 C. Edtmaier. Metall matriz- Verbundwerkstoffe Mit Carbon Nanotubes als Hochfeste und hochwarmeleitende einlarger ungsphase.Vienna University of Technology. 39p, 2005. Disponível em:  
[http://www.ipp.mpg.de/de/for/bereiche/material/seminare/MFSem/talks/Edtmaier\\_03-06-2005.pdf](http://www.ipp.mpg.de/de/for/bereiche/material/seminare/MFSem/talks/Edtmaier_03-06-2005.pdf)

Acesado em: 15/07/2008. 4.3.

- 64 Kittel, Charles. Introduction to Solid state physics. Chapter 16, Edit by John Wiley & Sons, New York, (1965). 4.4.