

Chapter 8 References

- ¹J. Kong, M. G. Chapline, H. Dai, “Functionalized Carbon Nanotubes for Molecular Hydrogen Sensors”, *Adv. Mater.*, 18, 1384 (2001).
- ²Y. H. Lee, Y. T. Jang, C. H. Choi, D. H. Kim, C. W. Lee, Y. S. Han, S. S. Yoon, J. K. Shin, S. T. Kim, E. K. Kim, B. K. Ju, “Direct Nanowiring of Carbon Nanotubes for Highly Integrated Electronic and Spintronic Devices”, *Adv. Mater.*, 13, 1371 (2001).
- ³F. Favier, E. C. Walter, M. P. Zach, T. Benter, R. M. Penner, “Hydrogen Sensors and Switches from Electrodeposited Palladium Mesowire Arrays”, *Science*, 293, 2227 (2001).
- ⁴S. R. Quake, A. Scherer, “From Micro- to Nanofabrication with Soft Materials”, *Science*, 290, 1536 (2000).
- ⁵X. T. Zhou, N. Wang, F. C. K. Au, H. L. Lai, H. Y. Peng, I. Bello, C. S. Lee, S. T. Lee, “Growth and Emission Properties of β -SiC Nanorods”, *Mater. Sci. Eng. A*, 286, 119 (2000).
- ⁶X. T. Zhou, H. L. Lai, H. Y. Peng, F. C. K. Au, L. S. Liao, N. Wang, I. Bello, C. S. Lee, S. T. Lee, “Thin β -SiC Nanorods and Their Field Emission Properties”, *Chem. Phys. Lett.*, 318, 58 (2000).
- ⁷Y. Cui, C. M. Leiber, “Functional Nanoscale Electronic Devices Assembled Using Silicon Nanowire Building Blocks”, *Science*, 291, 851 (2001).
- ⁸A. I. Yanson, I. K. Yanson, J. M. Van Ruitenbeek, “Observation of Shell Structure in Sodium Nanowires”, *Nature*, 400, 144 (1999).
- ⁹J. Hu, M. Ouyang, P. Yang, C. M. Lieber, “Controlled Growth and Electrical Properties of Heterojunctions of Carbon Nanotubes and Silicon Nanowires”, *Nature*, 399, 48 (1999).
- ¹⁰A. I. Yanson, G. B. Bollinger, H. E. van den Brom, N. Agrait, J. M. Ruitenbeek, “Formation and manipulation of a metallic wire of single gold atoms”, *Nature*, 395, 783 (1998).
- ¹¹A. Bezryadin, C. N. Lau, M. Tinkham, “Quantum Suppression of Superconductivity in Ultrathin Nanowires”, *Nature*, 404, 971 (2000).
- ¹²Y. Cui, Q. Wei, H. Park, C. M. Leiber, “Nanowire Nanosensors for Highly Sensitive and Selective Detection of Biological and Chemical Species”, *Science*, 293, 1289 (2001).
- ¹³Y. W. Wang, L. D. Zhang, G. W. Meng, X. S. Peng, Y. X. Jin, J. Zhang, “Fabrication of Ordered Ferromagnetic-Nonmagnetic Alloy Nanowire Arrays and their Magnetic Property Dependence on Annealing Temperature”, *J. Phys. Chem B*, 106, 2502 (2002).

- ¹⁴P. Yang, Y. Wu, R. Fan, “The Growth of Aligned Carbon Nanotubes on FeNiCo Catalyst Films”, *Int. J. Nanoscience.*, 1, 1 (2002).
- ¹⁵E. Tosatti, S. Prestipino, S. Kostmeier, A. D. Corso, F. D. D. Tolla, “String Tension and Stability of Magic Tip-Suspended Nanowires”, *Science*, 291, 288 (2001).
- ¹⁶J. Wang, M. S. Gudiksen, X. Duan, Y. Cui, C. M. Lieber, “Highly Polarized Photoluminescence and Photodetection from Single Indium Phosphide Nanowires”, *Science*, 293, 1455 (2001).
- ¹⁷X. C. Wu, W. H. Song, K. Y. Wang, T. Hu, B. Zhao, Y. P. Sun, J. J. Du, “Preparation and Photoluminescence Properties of Amorphous Silica Nanowires”, *Chem. Phys. Lett.*, 336, 53 (2001).
- ¹⁸H. Cao, D. Z. Zhang, S. H. Chang, S. T. Ho, E. W. Seelig, X. Liu, R. P. H. Chang, “Spatial Confinement of Laser Light in Active Random Media”, *Phys. Rev. Lett.*, 84, 5584 (2000).
- ¹⁹W. Wegscheider, L. N. Pfeiffer, M. M. Dignam, A. Pinczuk, K. W. West, S. L. McCall, R. Hull, “Lasing from Excitons in Quantum Wires”, *Phys. Rev. Lett.*, 71, 4071 (1993).
- ²⁰M. S. Gudiksen, L. J. Lauhon, J. Wang, D. C. Smith, C. M. Lieber, “Growth of Nanowire Superlattice Structures for Nanoscale Photonics and Electronics”, *Nature*, 415, 617 (2002).
- ²¹H. W. C. Postma, T. Teepen, Z. Yao, M. Grifoni, C. Dekker, “Carbon Nanotube Single-Electron Transistors at Room Temperature”, *Science*, 293, 76 (2001).
- ²²Y. Huang, X. Duan, Q. Wei, C. M. Lieber, “Directed Assembly of One-Dimensional Nanostructures into Functional Networks”, *Science*, 291, 630 (2001).
- ²³X. F. Duan, Y. Huang, J. F. Wang, C. M. Lieber, “Indium Phosphide Nanowires as Building Blocks for Nanoscale Electronic and Optoelectronic Devices”, *Nature*, 409, 66 (2001).
- ²⁴W. Han, S. Fan, Q. Li, W. Liang, B. Gu, D. Yu, “Continuous Synthesis and Characterization of Silicon Carbide Nanorods”, *Chem. Phys. Lett.*, 265, 374 (1997).
- ²⁵C. C. Tang, S. S. Fan, M. L. Chapelle, P. Li, “Silica-Assisted Catalytic Growth of Oxide and Nitride Nanowires”, *Chem. Phys. Lett.*, 333, 12 (2001).
- ²⁶S. T. Lee, N. Wang, C. S. Lee, “Semiconductor Nanowires: Synthesis, Structure and Properties”, *Mater. Sci. Eng. A*, 286, 16 (2000).
- ²⁷Z. Cui, G. W. Meng, W. D. Huang, G. Z. Wang, L. D. Zhang, “Preparation and Characterization of MgO Nanorods”, *Mater. Res. Bull.*, 35, 1653 (2000)
- ²⁸S. Iijima, “Helical Microtubules of Graphitic Carbon”, *Nature*, 354, 56 (1991).
- ²⁹Z. W. Pan, Z. R. Dai, Z. L. Wang, “Nanobelts of Semiconducting Oxides”, *Science*, 291, 1947 (2001).
- ³⁰G. Gundiah, A. Govindaraj, C. N. R. Rao, “Nanowires, Nanobelts and Related

- Nanostructures of Ga₂O₃”, Chem. Phys. Lett., 351, 189 (2002).
- ³¹G. W. Meng, L. D. Zhang, C. M. Mo, S. Y. Zhang, Y. Qin, S. P. Feng, H. J. Li, “Synthesis of “A β-SiC Nanorod within A SiO₂ Nanorod” One Dimensional Composite Nanostructures”, Solid state commun., 106, 215 (1998).
- ³²G. M. Meng, L. D. Zhang, C. M. Mo, S. Y. Zhang, Y. Qin, S. P. Feng, H. Y. Li, “Synthesis of “A β-SiC Nanorod within A SiO₂ Nanorod” One Dimensional Composite Nanostructures”, Solid State Commun. 106, 215 (1998).
- ³³Y. Zhang, K. Suenaga, C. Colliex, S. Iijima, “Coaxial Nanocable: Silicon Carbide and Silicon Oxide Sheathed with Boron Nitride and Carbon”, Science, 281, 973 (1998).
- ³⁴L. D. Zhang, G. M. Meng, F. Phillipp, “Synthesis and Characterization of Nanowires and Nanocables”, Mater. Sci. Eng. A, 286, 34 (2000).
- ³⁵L. X. Zhao, G. W. Meng, X. S. Peng, X. Y. Zhang, L. D. Zhang, “Synthesis, Raman Scattering, and Infrared Spectra of Large-Scale GaN Nanorods”, J. Cryst. Growth., 235, 124 (2002).
- ³⁶M. T. Björk, B. J. Ohlsson, T. Sass, A. I. Persson, C. Thelander, M. H. Magnusson, K. Deppert, L. R. Wallenberg, L. Samuelson, “One-dimensional Heterostructures in Semiconductor Nanowhiskers”, Appl. Phys. Lett., 80, 1058 (2002).
- ³⁷S. L. Zhang, B. F. Zhu, F. Huang, Y. Yan, E. Shang, S. Fan, W. Han, “Effect of Defects on Optical Phonon Raman Spectra in SiC Nanorods”, Solid state commun., 111, 647 (1999).
- ³⁸H. L. Liu, C. C. Chen, C. T. Chia, C. C. Yeh, C. H. Chen, M. Y. Yu, S. Keller, S. P. DenBaars, “Infrared and Raman-Scattering Studies in Single-Crystalline GaN Nanowires”, Chem. Phys. Lett., 345, 245 (2001).
- ³⁹G. Grosso, G. P. Parravicini, Solid State Physics, Academic Press (2000).
- ⁴⁰S. Fan, W. Liang, H. Dang, N. Franklin, T. Tomblor, M. Chapline, H. Dai, “Carbon Nanotube Arrays on Silicon Substrates and Their Possible Application”, Physica E, 8, 179 (2000).
- ⁴¹L. Nilsson, O. Groening, C. Emmenegger, O. Emmenegger, O. Kuettel, E. Schaller, L. Schlapbach, H. Kind, J-M. Bonard, K. Kern, “Scanning Field Emission from Patterned Carbon Nanotube Films”, Appl. Phys. Lett., 76, 2071 (2000).
- ⁴²Y. H. Lee, Y. T. Jang, D. H. Kim, J. H. Ahn, B. K. Ju, ”Realization of Gated Field Emitters for Electrophotonic Applications Using Carbon Nanotube Line Emitters Directly Grown into Submicrometer Holes“, Adv. Mater., 13, 479 (2001).
- ⁴³J. M. Bonard, N. Weiss, H. Kind, T. Stöckli, L. Forrö, K. Kern, A. Châtelain, “Catalytic Growth of Carbon Nanorods on a High-Tc Substrate”, Adv. Mater., 13, 148 (2001).
- ⁴⁴B. Gao, Z. Yue, Q. Qiu, Y. Cheng, H. Shimoda, L. Fleming, O. Zhou, „Fabrication

and Electron Field Emission Properties of Carbon Nanotube Films by Electrophoretic Deposition“, *Adv. Mater.*, 13, 1770 (2001).

⁴⁵C. J. Lee, T. J. Lee, S. C. Lyu, Y. Zhang, H. Ruh, H. J. Lee, “Field Emission from Well-Aligned Zinc Oxide Nanowires Grown at Low Temperature”, *Appl. Phys. Lett.*, 81, 3648 (2002).

⁴⁶S. H. Yang, M. Yokoyama, “Enhanced Field Emission in Modified Volcano-Shaped Field Emitter”, *Mater. Chem. Phys.*, 51, 6 (1997).

⁴⁷D. Hong, M. Aslam, M. Feldmann, M. Olinger, “Simulations of Fabricated Field Emitter Structures”, *J. Vac. Sci. Technol. B*, 12, 764 (1994).

⁴⁸D. N. Davydov, J. Haruyama, D. Routkevitch, B. W. Statt, D. Ellis, M. Moskovits, J. M. Xu, “Nonlithographic Nanowire-Array Tunnel Device: Fabrication, Zero-Bias Anomalies, and Coulomb Blockade”, *Phys. Rev. B*, 57, 13550 (1998).

⁴⁹N. I. Kovtyukhova, B. R. Martin, J. K. N. Mbindyo, T. E. Mallouk, M. Cabassi, T. S. Mayer, “Layer-by-Layer Self-Assembly Strategy for Template Synthesis of Nanoscale Devices”, *Mater. Sci. Eng. C*, 19, 255 (2002).

⁵⁰T. Rueckes, K. Kim, E. Joselevich, G. Y. Tseng, C. L. Cheung, C. M. Lieber, “Carbon Nanotube-Based Nonvolatile Random Access Memory for Molecular Computing”, *Science*, 289, 94 (2000).

⁵¹D. C. Duffy, J. C. McDonald, O. J. A. Schueller, G. M. Whitesides, “Rapid Prototyping of Microfluidic Systems in Poly(dimethylsiloxane)”, *Anal. Chem.*, 70, 4974 (1998).

⁵²X. Duan, Y. Huang, Y. Cui, J. Wang, C. M. Lieber, “Indium Phosphide Nanowires as Building Blocks for Nanoscale Electronic and Optoelectronic Devices”, *Nature* 409, 66 (2001).

⁵³M. S. Ho, I. S. Hwang, T. T. Tsong, “Direct Observation of Electromigration of Si Magic Clusters on Si (111) Surfaces”, *Phys. Rev. Lett.*, 84, 5792 (2000).

⁵⁴A. Hassanien, M. Gao, M. Tokumoto, L. Dai, “Scanning Tunneling Microscopy of Aligned Coaxial Nanowires of Polyaniline Passivated Carbon Nanotubes”, *Chem. Phys. Lett.*, 342, 479 (2001).

⁵⁵J. H. Hafner, C. L. Cheung, A. T. Woolley, C. M. Lieber, “Structural and Functional Imaging with Carbon Nanotube AFM Probes”, *Progress in Biophysics and Molecular Biology*, 77, 73 (2001).

⁵⁶S.S. Wong, J.D. Harper, P.T. Lansbury, C.M. Lieber, “Carbon Nanotube Tips: High-Resolution Probes for Imaging Biological Systems”, *J. Am. Chem. Soc.*, 120, 603 (1998).

⁵⁷A. Notargiacomo, E. Giovine, F. Evangelisti, V. Foglietti, R. Leoni, “EBL- and AFM-Based Techniques for Nanowires Fabrication on Si/SiGe”, *Mater. Sci. Eng. C*, 19, 185 (2002).

- ⁵⁸T. Müller, K. H. Heinig, B. Schmidt, "Template-Directed Self-Assembly of Buried Nanowires and the Pearling Instability", *Mater. Sci. Eng. C*, 19, 209 (2002).
- ⁵⁹C. C. Tang, S. S. Fan, P. Li, M. L. Chapelle, H. Y. Dang, "In Situ Catalytic Growth of Al₂O₃ and Si Nanowires", *J. Cryst. Growth.*, 224, 117 (2001).
- ⁶⁰Y. Cui, L. J. Lsuhon, M. S. Gudiksen, J. Wang, C. M. Leiber, "Diameter-Controlled Synthesis of Single-Crystal Silicon Nanowires", *Appl. Phys. Lett.*, 78, 2214 (2001).
- ⁶¹X. Y. Zhang, L. Zhang, G. W. Meng, G. H. Li, N. Y. Jin-Phillipp, F. Phillipp, "Synthesis of Ordered Single Crystal Silicon Nanowire Arrays", *Adv. Mater.*, 13, 1238 (2001).
- ⁶²H. Y. Peng, Z. W. Pan, L. Xu, X. H. Fan, N. Wang, C. S. Lee, S. T. Lee, „Synthesis of Ordered Single Crystal Silicon Nanowire Arrays“, *Adv. Mater.*, 13, 317 (2001).
- ⁶³Y. Wu, P. Yang, "Germanium Nanowire Growth via Simple Vapor Transport", *Chem. Mater.*, 12, 605 (2000).
- ⁶⁴G. Gu, M. Burghard, G. T. Kim, G. S. Düsberg, P. W. Chiu, V. Krstic, S. Roth, W. Q. Han, "Growth and Electrical Transport of Germanium Nanowires", *J. Appl. Phys.*, 90, 5747 (2001).
- ⁶⁵J. Wang, M. S. Gudiksen, X. Duan, Y. Cui, C. M. Leiber, "Highly Polarized Photoluminescence and Photodetection from Single Indium Phosphide Nanowires", *Science*, 293, 1455 (2001).
- ⁶⁶X. Duan, J. Wang, C. M. Lieber, "Synthesis and Optical Properties of Gallium Arsenide Nanowires", *Appl. Phys. Lett.*, 76, 1116 (2000).
- ⁶⁷Z. R. Dai, J. L. Gole, J. D. Stout, Z. L. Wang, "Tin Oxide Nanowires, Nanoribbons, and Nanotubes", *J. Phys. Chem. B*, 106, 1274 (2002).
- ⁶⁸M. Yazawa, M. Koguchi, A. Muto, M. Ozawa, K. Hiruma, "Effect of One Monolayer of Surface Gold Atoms on The Epitaxial Growth of InAs Nanowhiskers", *Appl. Phys. Lett.*, 61, 2051 (1992).
- ⁶⁹R. Jayavel, T. Mochiku, S. Ooi, K. Hirata, "Vapour–Liquid–Solid (VLS) Growth Mechanism of Superconducting Bi–Sr–Ca–Cu–O Whiskers", *J. Cryst. Growth.*, 229, 339 (2001).
- ⁷⁰N. Ahlén, M. Johnsson, A. K. Larsson, B. Sundman, "On the Carbothermal Vapour–Liquid–Solid (VLS) Mechanism for TaC, TiC, and Ta_xTi_{1-x}C Whisker Growth", *J. Eur. Ceram. Soc.*, 20, 2607 (2000).
- ⁷¹B. H. Hong, S. C. Bae, C. W. Lee, S. Jeong, K. S. Kim, "Ultrathin Single-Crystalline Silver Nanowire Arrays Formed in an Ambient Solution Phase.", *Science*, 294, 348 (2001).
- ⁷²S. Wang, S. Yang, "Growth of Crystalline Cu₂S Nanowire Arrays on Copper Surface: Effect of Copper Surface Structure, Reagent Gas Composition, and Reaction Temperature", *Chem. Mater.*, 13, 4794 (2001).

- ⁷³J. Qi, Y. Masumoto, “Copper Silicide Nanocrystals in Silicon Nanowires”, *Mater. Res. Bull.*, 36, 1407 (2001).
- ⁷⁴H. Masuda, M. Satoh, “Fabrication of Gold Nanodot Array Using Anodic Porous Alumina as an Evaporation Mask”, *Jpn. J. Appl. Phys.*, 35, L126 (1996).
- ⁷⁵Z. G. Bai, D. P. Yu, H. Z. Zhang, Y. Ding, Y. P. Wang, X. Z. Gai, Q. L. Hang, G. C. Xiong, S. Q. Feng, “Nano-Scale GeO₂ Wires Synthesized by Physical Evaporation”, *Chem. Phys. Lett.*, 303, 311 (1999).
- ⁷⁶L. Cao, Z. Zhang, L. Sun, C. Gao, M. He, Y. Wang, Y. Li, X. Zhang, G. Li, J. Zhang, W. Wang, “Well-Aligned Boron Nanowire Arrays”, *Adv. Mater.*, 13, 1701 (2001).
- ⁷⁷L. C. Chen, S. W. Chang, C. S. Chang, C. Y. Wen, J. J. Wu, Y. F. Chen, Y. S. Huang, K. H. Chen, “Catalyst-Free and Controllable Growth of SiC_xN_y Nanorods”, *J. Phys. Chem. Solids.*, 62, 1567 (2001).
- ⁷⁸C. H. Liang, G. W. Meng, W. Chen, Y. W. Wang, L. D. Zhang, “Growth and Characterization of TiC Nanorods Activated by Nickel Nanoparticles”, *J. Cryst. Growth.*, 220, 296 (2000).
- ⁷⁹X. C. Wu, W. H. Song, W. D. Huang, M. H. Pu, B. Zhao, Y. P. Sun, J. J. Du, “Simultaneous Growth of α -Si₃N₄ and β -SiC Nanorods”, *Mater. Res. Bull.*, 36, 847 (2001).
- ⁸⁰X. Wang, Y. Lui, D. Zhu, “One- and Three-Dimensional Alignment and Patterning of Carbon Nanotubes”, *Adv. Mater.*, 14, 165 (2002).
- ⁸¹N. Wang, K. K. Fung, S. Wang, S. Yang, “Oxide-Assisted Nucleation and Growth of Copper Sulphide Nanowire Arrays”, *J. Cryst. Growth.*, 233, 226 (2001).
- ⁸²B. Zheng, Y. Wu, P. Yang, J. Liu, “Synthesis of Ultra-Long and Highly Oriented Silicon Oxide Nanowires from Liquid Alloys”, *Adv. Mater.*, 14, 122 (2002).
- ⁸³J. Westwater, D. P. Gosain, S. Tomiya, S. Usui, H. Ruda, “Growth of Silicon Nanowires via Gold/Silane Vapor–Liquid–Solid Reaction”, *J. Vac. Sci. Technol. B*, 15, 554 (1997).
- ⁸⁴Y. Zhang, N. Wang, R. He, X. Chen, J. Zhu, “Synthesis of SiC Nanorods Using Floating Catalyst”, *Solid State Commun.*, 118, 595 (2001).
- ⁸⁵Z. Zhang, B. Wei, W. Ward, R. Vajtai, G. Ramanath, P. M. Ajayan, “Synthesis of Ultra-Long and Highly Oriented Silicon Oxide Nanowires from Liquid Alloys”, *Adv. Mater.*, 13, 1767 (2001).
- ⁸⁶S. Y. Li, C. Y. Lee, T. Y. Tseng, “Copper-Catalyzed ZnO Nanowires on Silicon (100) Grown by Vapor–Liquid–Solid Process”, *J. Cryst. Growth.*, 247, 357 (2003).
- ⁸⁷T. Hanrath, B. A. Korgel, “Nucleation and Growth of Germanium Nanowires Seeded by Organic Monolayer-Coated Gold Nanocrystals”, *J. Am. Chem. Soc.*, 124, 1424 (2002).
- ⁸⁸J. D. Holmes, K. P. Johnston, R. C. Doty, B. A. Korgel, “Control of Thickness and

- Orientation of Solution-Grown Silicon Nanowires”, *Science*, 287, 1471 (2000).
- ⁸⁹Y. Huang, X. Duan, Y. Cui, C. M. Lieber, “Gallium Nitride Nanowire Nanodevices”, *Nano Lett.*, 2, 101 (2002).
- ⁹⁰C. J. Murphy, N. R. Jana, “Controlling the Aspect Ratio of Inorganic Nanorods and Nanowires”, *Adv. Mater.*, 14, 80 (2002).
- ⁹¹M. J. Edmondson, W. Zhou, S. A. Sieber, I. P. Jones, I. Gameson, P. A. Anderson, P. P. Edwards, “Electron-Beam Induced Growth of Bare Silver Nanowires from Zeolite Crystallites”, *Adv. Mater.*, 13, 1608 (2001).
- ⁹²J. V. Ryan, A. D. Berry, M. L. Anderson, J. W. Long, R. M. Stoud, V. M. Cepak, V. M. Browning, D. R. Rolison, C. I. Merzbacher, “Electronic Connection to the Interior of A Mesoporous Insulator with Nanowires of Crystalline RuO₂”, *Nature*, 406, 169 (2000).
- ⁹³D. Xu, D. Chen, Y. Xu, X. Shi, G. Guo, L. Gui, Y. Tang, “Preparation of II-VI Group Semiconductor Nanowire Arrays by Dc Electrochemical Deposition in Porous Aluminum Oxide Templates”, *Pure Appl. Chem.*, 72, 127 (2000).
- ⁹⁴B. Gate, Y. Wu, Y. Yin, P. Yang, Y. Xia, “Single-Crystalline Nanowires of Ag₂Se Can Be Synthesized by Templating against Nanowires of Trigonal Se”, *J. Am. Chem. Soc.* 123, 11500 (2001).
- ⁹⁵Y. Gao, Y. Bando, T. Sato, Y. Kitami, “Needle-Like SiC Nanorods”, *Jpn. J. Appl. Phys.*, 40, L1065 (2001).
- ⁹⁶W. Han, S. Fan, Q. Li, Y. Hu, “Synthesis of Gallium Nitride Nanorods through A Carbon Nanotube-Confined Reaction”, *Science*, 277, 1287 (1997).
- ⁹⁷A. H. Carim, K. K. Lew, J. M. Redwing, “Bicrystalline Silicon Nanowires”, *Adv. Mater.*, 13, 1489 (2001).
- ⁹⁸J. Zou, L. Pu, X. Bao, D. Feng, “Branchy Alumina Nanotubes”, *Appl. Phys. Lett.*, 80, 1079 (2002).
- ⁹⁹Y. C. Sui, J. A. González-León, A. Bermúdez, J. M. Saniger, “Synthesis of Multi Branched Carbon Nanotubes in Porous Anodic Aluminum Oxide Template”, *Carbon*, 39, 1709 (2001).
- ¹⁰⁰T. Thurn-Albrecht, J. Schotter, G. A. Kästle, N. Emley, T. Shibauchi, L. Krusin-Elbaum, K. Guarini, C. T. Black, M. T. Tuominen, T. P. Russell, “Ultrahigh-Density Nanowire Arrays Grown in Self-Assembled Diblock Copolymer Templates”, *Science*, 290, 2126 (2000).
- ¹⁰¹K. B. Lee, S. M. Lee, J. Cheon, “Size-Controlled Synthesis of Pd Nanowires Using a Mesoporous Silica Template via Chemical Vapor Infiltration”, *Adv. Mater.*, 13, 517 (2001).
- ¹⁰²H. Cao, Z. Xu, H. Sang, D. Sheng, C. Tie, “Template Synthesis and Magnetic Behavior of an Array of Cobalt Nanowires Encapsulated in Polyaniline Nanotubules”,

Adv. Mater., 13, 121 (2001).

¹⁰³C. M. Shen, X. G. Zhang, H. L. Li, “DC Electrochemical Deposition of CdSe Nanorods Array Using Porous Anodic Aluminum Oxide emplate”, Mater. Sci. Eng. A, 303, 19 (2001).

¹⁰⁴N. I. Kovtyukhova, B. R. Martin, J. K. N. Mbindyo, P. A. Smith, B. Razavi, T. S. Mayer, T. E. Mallouk, “Layer-by-Layer Assembly of Rectifying Junctions in and on Metal Nanowires”, J. Phys. Chem. B, 105, 8762 (2001).

¹⁰⁵B. Ye, M. Trudeau, D. Antonelli, “Synthesis and Electronic Properties of Potassium Fulleride Nanowires in a Mesoporous Niobium Oxide Host”, Adv. Mater., 13, 29 (2001).

¹⁰⁶Y. Liu, C. Zheng, W. Wang, C. Yin, G. Wang, “Synthesis and Characterization of Rutile SnO₂ Nanorods”, Adv. Mater., 13, 1883 (2001).

¹⁰⁷M. Yada, M. Mihara, S. Mouri, M. Kuroki, T. Kijima, “Rare Earth (Er, Tm, Yb, Lu) Oxide Nanotubes Templated by Dodecylsulfate Assemblies”, Adv. Mater., 14, 309 (2002)

¹⁰⁸K. D. Hermanson, S. O. Lumsdon, J. P. Williams, E. W. Kaler, O. D. Velev, “Dielectrophoretic Assembly of Electrically Functional Microwires from Nanoparticle Suspensions”, Science, 294, 1082 (2001).

¹⁰⁹J. Bao, C. Tie, Z. Xu, Q. Ma, J. Hong, H. Sang, D. Sheng, “An Array of Concentric Composite Nanostructures of Zirconia Nanotubules/Cobalt Nanowires: Preparation and Magnetic Properties”, Adv. Mater., 14, 44 (2002).

¹¹⁰M. Zheng, L. Zhang, X. Zhang, J. Zhang, G. Li, “Fabrication and Optical Absorption of Ordered Indium Oxide Nanowire Arrays Embedded in Anodic Alumina Membranes”, Chem. Phys. Lett., 334, 298 (2001).

¹¹¹E. J. Bae, W. B. Choi, K. S. Jeong, J. U. Chu, G. S. Park, S. Song, I. K. Yoo, “Selective Growth of Carbon Nanotubes on Pre-patterned Porous Anodic Aluminum Oxide”, Adv. Mater., 14, 277 (2002).

¹¹²R. J. Brodd, K. R. Bullock, R. A. Leising, R. L. Muddaugh, J. R. Miller and E. Takeuchi, “Batteries, 1977 to 2002”, J. Electrochem. Soc., 151, K1 (2004).

¹¹³A. Burke, “Ultracapacitors: Why, How, and Where is The Technology”, J. Power Sources, 91, 37 (2000).

¹¹⁴Y. J. Kim, Y. Masuzawa, S. Ozaki, M. Endo, and M. S. Dresselhaus, “PVDC-Based Carbon Material by Chemical Activation and Its Application to Nonaqueous EDLC”, J. Electrochem. Soc., 151, E199 (2004).

¹¹⁵J. H. Jang and S. M. Oh, “Complex Capacitance Analysis of Porous Carbon Electrodes for Electric Double-Layer Capacitors”, J. Electrochem. Soc., 151, A571 (2004).

¹¹⁶A. Laforgue, P. Simon, J. F. Fauvarque, M. Mastragostino, F. Soavi, J. F. Sarrau, P.

- Lailier, M. Conte, E. Rossi, and S. Saguatti, "Activated Carbon/Conducting Polymer Hybrid Supercapacitors", *J. Electrochem. Soc.*, 150, A645 (2003).
- ¹¹⁷K. H. Chang, C. C. Hu, "Oxidative Synthesis of $\text{RuO}_x \cdot n\text{H}_2\text{O}$ with Ideal Capacitive Characteristics for Supercapacitors", *J. Electrochem. Soc.*, 151, A958 (2004).
- ¹¹⁸S. L. Kuo, and N. L. Wu, "Composite Supercapacitor Containing Tin Oxide and Electroplated Ruthenium Oxide", *Electrochem. Solid-State Lett.*, 6, A85 (2003).
- ¹¹⁹Q. Lin, J. N. Harb, "Implementation of a Thick-Film Composite Li-Ion Microcathode Using Carbon Nanotubes as the Conductive Filler", *J. Electrochem. Soc.*, 151, A1115 (2004).
- ¹²⁰S. H. Joo, S. J. Choi, I. Oh, J. Kwak, Z. Liu, O. Terasaki, and R. Ryoo, "Ordered Nanoporous Arrays of Carbon Supporting High Dispersions of Platinum Nanoparticles", *Nature*, 412, 169 (2001).
- ¹²¹K. H. An, K. K. Jeon, J. K. Heo, S. C. Lim, D. J. Bae, and Y. H. Lee, "High-Capacitance Supercapacitor Using a Nanocomposite Electrode of Single-Walled Carbon Nanotube and Polypyrrole", *J. Electrochem. Soc.*, 149, A1058 (2002).
- ¹²²F. Picó, J. M. Rojo, M. L. Sanjuán, A. Ansón, A. M. Benito, M. A. Callejas, W. K. Maser, and M. T. Martínez, "Single-Walled Carbon Nanotubes as Electrodes in Supercapacitors", *J. Electrochem. Soc.*, 151, A831 (2004).
- ¹²³E. Frackowiak, K. Metenier, V. Bertagna, and F. Beguin, "Supercapacitor Electrodes from Multiwalled Carbon Nanotubes", *Appl. Phys. Lett.*, 77, 2421 (2000).
- ¹²⁴N. Miura, S. Oonishi, and K. R. Prasad, "Indium Tin Oxide/Carbon Composite Electrode Material for Electrochemical Supercapacitors", *Electrochem. Solid-State Lett.*, 7, A247 (2004).
- ¹²⁵J. A. Smith, M. Josowicz, and J. Janata, "Polyaniline-Gold Nanocomposite System", *J. Electrochem. Soc.*, 150, E384 (2003).
- ¹²⁶W. Sugimoto, T. Shibusaki, Y. Murakami, and Y. Takasu, "Charge Storage Capabilities of Rutile-Type $\text{RuO}_2\text{-VO}_2$ Solid Solution for Electrochemical Supercapacitors", *Electrochem. Solid-State Lett.*, 5, A170 (2002).
- ¹²⁷J. H. Park, J. M. Ko, and O. O. Park, "Carbon Nanotube/ RuO_2 Nanocomposite Electrodes for Supercapacitors", *J. Electrochem. Soc.*, 150, A864 (2003).
- ¹²⁸X. Hu, and C. T. Chan, "Photonic Crystals with Silver Nanowires as A Near-Infrared Superlens", *Appl. Phys. Lett.*, 85, 1520 (2004).
- ¹²⁹Y. J. Chen, Q. H. Li, Y. X. Liang, T. H. Wang, Q. Zhao, and D. P. Yu, "Field-Emission from Long SnO_2 Nanobelt Arrays", *Appl. Phys. Lett.*, 85, 5682 (2004).
- ¹³⁰S. Hofmann, C. Ducati, B. Kleinsorge, and J. Pobertson, "Direct Growth of Aligned Carbon Nanotube Field Emitter Arrays onto Plastic Substrates", *Appl. Phys. Lett.*, 83,

4661(2003).

¹³¹O. J. Lee, and K. H. Lee, "Fabrication of Flexible Field Emitter Arrays of Carbon Nanotubes Using Self-Assembly Monolayers", *Appl. Phys. Lett.*, 82, 3770 (2002).

¹³²V. V. Zhinov, E. I. Givarfizov, and P. S. Plekhanov, "Field Emission from Silicon Spikes with Diamond Coatings", *J. Vac. Sci. Technol. B*, 13, 418 (1995).

¹³³L. Vayssieres, K. Keis, A. Hagfeldt, S. E. Lindquist, "Three-Dimensional Array of Highly Oriented Crystalline ZnO Microtubes", *Chem. Mater.*, 13, 4395 (2001).

¹³⁴C. X. Xu, X. W. Sun, C. Yuen, B. J. Chen, S. F. Yu, and Z. L. Dong, "Ultraviolet Amplified Spontaneous Emission from Self-Organized Network of Zinc Oxide Nanofibers", *Appl. Phys. Lett.*, 86, 011118 (2005).

¹³⁵S. Fujihara, A. Suzuki, and T. Kimura, "Ga-Doping Effects on Electrical and Luminescent Properties of ZnO:(La,Eu)OF Red Phosphor Thin Films", *J. Appl. Phys.*, 94, 2411 (2003).

¹³⁶S. Y. Li, P. Lin, C. Y. Lee, and T. Y. Tseng, "Field Emission and Photofluorescent Characteristics of Zinc Oxide Nanowires Synthesized by a Metal Catalyzed vapor-liquid-solid Process", *J. Appl. Phys.*, 95, 3711 (2004).

¹³⁷J. J. Wu, and S. C. Liu, "Low-Temperature Growth of Well-Aligned ZnO Nanorods by Chemical Vapor Deposition", *Adv. Mater.*, 14, 215 (2002).

¹³⁸C. H. Liu, W. C. Yiu, F. C. K. Au, J. X. Ding, C. S. Lee, and S. T. Lee, "Electrical Properties of Zinc Oxide Nanowires and Intramolecular *p-n* Junctions", *Appl. Phys. Lett.*, 83, 3168 (2003).

¹³⁹Y. R. Ryu, S. Zhu, D. C. Look, J. M. Wrobel, H. M. Jeong, H. W. White, "Synthesis of p-Type ZnO Films", *J. Cryst. Growth.*, 216, 330 (2000).

¹⁴⁰P. Fons, K. Iwata, A. Yamada, K. Matsubara, S. Niki, "Uniaxial Locked Epitaxy of ZnO on The *a* Face of Sapphire", *Appl. Phys. Lett.*, 77, 1801 (2000).

¹⁴¹J. Han, P. Q. Mantas, A. M. R. Senos, "Effect of Al and Mn Doping on the Electrical Conductivity of ZnO", *J. Eur. Ceram. Soc.*, 21, 1883 (2001).

¹⁴²J. B. Lee, H. J. Lee, S. H. Seo. J. S. Park, "Characterization of Undoped and Cu-Doped ZnO Films for Surface Acoustic Wave Applications", *Thin Solid Films.*, 398, 641 (2001).

¹⁴³Y. R. Ryu, W. J. Kim, H. W. White, "Fabrication of Homostructural ZnO *p-n* Junctions", *J. Cryst. Growth.*, 219, 419 (2000).

¹⁴⁴W. T. Lim, C. H. Lee, "Highly Oriented ZnO Thin Films Deposited on Ru/Si Substrates", *Thin Solid Films.*, 353, 12 (1999).

¹⁴⁵Y. Yoshino, T. Makino, Y. Katayama, T. Hata, "Optimization of Zinc Oxide Thin Film for Surface Acoustic Wave Filters by Radio Frequency Sputtering", *Vacuum*, 59, 538 (2000).

¹⁴⁶K. Vanheusden, W. L. Warren, C. H. Seager, D. R. Tallant, J. A. Voigt,

“Mechanisms Behind Green Photoluminescence in ZnO Phosphor Powders”, *J. Appl. Phys.*, 79, 7983 (1996).

¹⁴⁷M. Purica, E. Budianu, E. Rusu, “Heterojunction with ZnO Polycrystalline Thin Films for Optoelectronic Devices Applications”, *Microelectron. Eng.*, 51, 425 (2000).

¹⁴⁸P. Yu, Z. K. Tang, G. K. L. Wong, M. Kawasaki, A. Ohtomo, H. Koinuma, Y. Segawa, “Room-Temperature Gain Spectra and Lasing in Microcrystalline ZnO Thin Films”, *J. Cryst. Growth.*, 184, 601 (1998).

¹⁴⁹Z. K. Tang, G. K. L. Wong, P. Yu, M. Kawasaki, A. Ohtomo, H. Koinuma, Y. Segawa, “Room-Temperature Ultraviolet Laser Emission from Self-Assembled ZnO Microcrystallite Thin Films”, *Appl. Phys. Lett.*, 72, 3270 (1998).

¹⁵⁰Y. P. Wang, W. I. Lee, T. Y. Tseng, “Degradation Phenomena of Multilayer ZnO–Glass Varistors Studied by Deep Level Transient Spectroscopy”, *Appl. Phys. Lett.*, 69, 1807 (1996).

¹⁵¹M. H. Huang, Y. Wu, H. Feick, N. Tran, E. Weber, P. Yang, „Catalytic Growth of Zinc Oxide Nanowires by Vapor Transport“, *Adv. Mater.*, 13, 113 (2001).

¹⁵²J. C. Johnson, H. Yan, R. D. Schaller, L. H. Haber, R. J. Saykally, P. Yang, “Single Nanowire Lasers”, *J. Phys. Chem. B*, 105, 11387 (2001).

¹⁵³M. H. Huang, S. Mao, H. Feick, H. Yan, Y. Wu, H. Kind, E. Weber, R. Russo, P. Yang, “Room-Temperature Ultraviolet Nanowire Nanolasers”, *Science*, 292, 1897 (2001).

¹⁵⁴G. Shi, C. M. Mo, W. L. Cai, L. D. Zhang, “Photoluminescence of ZnO Nanoparticles in Alumina Membrane with Ordered Pore Arrays”, *Solid State Commun.*, 115, 253 (2000).

¹⁵⁵J. Y. Li, X. L. Chen, H. Li, M. He, Z. Y. Qiao, “Fabrication of Zinc Oxide Nanorods”, *J. Cryst. Growth.*, 233, 5 (2001).

¹⁵⁶Y. C. Kong, D. P. Yu, B. Zhang, W. Fang, S. Q. Feng, “Ultraviolet-Emitting ZnO Nanowires Synthesized by A Physical Vapor Deposition Approach”, *Appl. Phys. Lett.*, 78, 407 (2001).

¹⁵⁷J. Q. Hu, Q. Li, N. B. Wong, C. S. Lee, S. T. Lee, “Synthesis of Uniform Hexagonal Prismatic ZnO Whiskers”, *Chem. Mater.*, 14, 1216 (2002).

¹⁵⁸L. Vayssieres, K. Keis, S. E. Lindquist, A. Hagfeldt, “Purpose-Built Anisotropic Metal Oxide Material: 3D Highly Oriented Microrod Array of ZnO”, *J. Phys. Chem. B*, 105, 3350 (2001).

¹⁵⁹H. Saitoh, Y. Namioka, H. Sugata, S. Ohshio, “Nanoindentation Analysis of Al:ZnO Epitaxial Whiskers”, *Jpn. J. Appl. Phys.*, 40, 6024 (2001).

¹⁶⁰R. Könenkamp, K. Boedecker, M. C. Lux-Steiner, M. Poschenrieder, F. Zenia, C. L. Clement, S. Wagner, “Thin Film Semiconductor Deposition on Free-Standing ZnO Columns”, *Appl. Phys. Lett.*, 77, 2575 (2000).

- ¹⁶¹L. Guo, J. X. Cheng, X. Y. Li, Y. J. Yan, S. H. Yang, C. L. Yang, J. N. Wang, W. K. Ge, “Synthesis and Optical Properties of Crystalline Polymer-Capped ZnO Nanorods”, *Mater. Sci. Eng. C*, 16, 123 (2001).
- ¹⁶²Y. B. Li, Y. Bando, and D. Golberg, “ZnO Nanoneedles with Tip Surface Perturbations: Excellent Field Emitters”, *Appl. Phys. Lett.*, 84, 3603 (2004).
- ¹⁶³D. Zhao, Y. Liu, D. Shen, Y. Lu, J. Zhang and X. Fan, “Photoluminescence Properties of $Mg_xZn_{1-x}O$ Alloy Thin Films Fabricated by The Sol-Gel Deposition Method”, *J. Appl. Phys.*, 90, 5561 (2001).
- ¹⁶⁴Y. W. Heo, M. Kaufman, K. Pruessner, D. P. Norton, F. Ren, M. F. Chisholm and P. H. Fleming, “Optical Properties of $Zn_{1-x}Mg_xO$ Nanorods Using Catalysis-Driven Molecular Beam Epitaxy”, *Solid-State Electronics.*, 47, 2269 (2003).
- ¹⁶⁵S. Johnson, A. Markwitz, M. Rudolphi, H. Baumann, S. P. Oei, B. K. Teo, and W. I. Milne, “Field Emission Properties of Self-Assembled Silicon Nanostructures on *n*- and *p*-Type Silicon”, *Appl. Phys. Lett.*, 85, 3277 (2004).
- ¹⁶⁶T. Matsukawa, S. Kanemaru, K. Tokunaga, and J. Itoh, “Effects of Conduction Type on Field-Electron Emission from Single Si Emitter Tips with Extraction Gate”, *J. Vac. Sci. Technol. B*, 18, 1111 (2000).
- ¹⁶⁷S. Kanemaru, T. Hirano, H. Tanoue, and J. Itoh, “Control of Emission Currents from Silicon Field Emitter Arrays Using A Built-in MOSFET”, *Appl. Surf. Sci.*, 111, 218 (1997).
- ¹⁶⁸J. M. Bian, X. M. Li, C. Y. Zhang, W. D. Yu, and X. D. Gao, “*p*-type ZnO Films by Monodoping of Nitrogen and ZnO-Based *p-n* Homojunctions”, *Appl. Phys. Lett.*, 85, 4070 (2004).
- ¹⁶⁹K. Ip, Y. W. Heo, D. P. Norton, S. J. Pearton, J. R. LaRoche, and F. Ren, “ $Zn_{0.9}Mg_{0.1}O/ZnO$ *p-n* Junctions Grown by Pulsed-Laser Deposition”, *Appl. Phys. Lett.*, 85, 1169 (2004).
- ¹⁷⁰S. B. Zhang, S. H. Wei, Y. Yan, “The Thermodynamics of Codoping: How does It Work?” *Physica B*, 302, 135 (2001).
- ¹⁷¹Y. K. Kwon, Y. Li, Y. W. Heo, M. Jones, P. H. Holloway, D. P. Norton, Z. V. Park, S. Li, “Enhancement-Mode Thin-Film Field-Effect Transistor Using Phosphorus-Doped (Zn,Mg)O Channel”, *Appl. Phys. Lett.*, 84, 2685 (2004).
- ¹⁷²Y. W. Heo, Y. K. Kwon, Y. Li, S. J. Pearton, and D. P. Norton, “*p*-type Behavior in Phosphorus-Doped (Zn,Mg)O Device Structures”, *Appl. Phys. Lett.*, 84, 3474 (2004).
- ¹⁷³T. Miyata, Y. Minamino, S. Ida, and T. Minami, “Highly Transparent and Conductive ZnO:Al Thin Films Prepared by Vacuum Arc Plasma Evaporation”, *J. Vac. Sci. Technol. A*, 22, 1711 (2004).
- ¹⁷⁴Y. S. Choi, J. H. Kang, Y. J. Park, W. B. Choi, C. J. Lee, S. H. Jo, C. G. Lee, J. H. You, J. E. Jung, N. S. Lee and J. S. Kim, “An Under-Gate Triode Structure Field

Emission Display with Carbon Nanotube Emitters”, *Diamond Relat. Mater.*, 10, 1705 (2001).

¹⁷⁵S. G. Yu, W. K. Yi, J. Lee, T. Jeong, S. H. Jin, J. Heo, J. H. Kang, Y. S. Choi, C. S. Lee, J. B. Yoo, and J. M. Kim, “Energy Distribution for Undergate-Type Triode Carbon Nanotube Field Emitters”, *Appl. Phys. Lett.*, 80, 4036 (2002).

¹⁷⁶Y. S. Choi, “A Simple Structure and Fabrication of Carbon-Nanotube Field Emission Display”, *Appl. Surf. Sci.*, 221, 370 (2004).

¹⁷⁷B. P. Zhang, K. Wakatsuki, N. T. Binh, Y. Segawa, and N. Usami, “Low-Temperature Growth of ZnO Nanostructure Networks”, *J. Appl. Phys.*, 96, 340 (2004).

¹⁷⁸M. A. Guillorn, A. V. Melechko, V. I. Merkulov, D. K. Hensley, M. L. Simpson and D. H. Lowndes, “Self-Aligned Gated Field Emission Devices Using Single Carbon Nanofiber Cathodes”, *Appl. Phys. Lett.*, 81, 3660 (2002).

¹⁷⁹Y. W. Jin, J. E. Jung, Y. J. Park, J. H. Choi, D. S. Jung, H. W. Lee, S. H. Park, N. S. Lee, J. M. Kim, T. Y. Ko, S. J. Lee, S. Y. Hwang, J. H. You, J. B. Yoo, and C. Y. Park, “Triode-Type Field Emission Array Using Carbon Nanotubes and A Conducting Polymer Composite Prepared by Electrochemical Polymerization”, *J. Appl. Phys.*, 92, 1065 (2002).

¹⁸⁰S. Y. Li, P. Lin, C. Y. Lee, M. S. Ho and T. Y. Tseng, “Fabrication of Vertical ZnO Nanowires on Silicon (100) with Epitaxial ZnO Buffer Layer”, *J. Nanosci. Nanotech.*, 4, 968 (2004).

¹⁸¹C. L. Tsai, C. F. Chen, C. L. Lin, “Field Emission from Well-Aligned Carbon Nanotips Grown in A Gated Device Structure”, *Appl. Phys. Lett.*, 80, 1821 (2002).

¹⁸²I. T. Han, H. J. Kim, Y. J. Park, N. Lee, J. E. Jang, J. W. Kim, J. E. Jung and J. M. Kim, “Fabrication and Characterization of Gated Field Emitter Arrays with Self-Aligned Carbon Nanotubes Grown by Chemical Vapor Deposition”, *Appl. Phys. Lett.*, 81, 2070 (2002).

¹⁸³C. C. Hu, C. C. Wang, “Nanostructures and Capacitive Characteristics of Hydrous Manganese Oxide Prepared by Electrochemical Deposition”, *J. Electrochem. Soc.*, 150, A1079 (2003).

¹⁸⁴J. K. Chang, and W. T. Tsai, “Material Characterization and Electrochemical Performance of Hydrous Manganese Oxide Electrodes for Use in Electrochemical Pseudocapacitors”, *J. Electrochem. Soc.*, 150, A1333 (2003).

¹⁸⁵S.A.M. Lima, F.A. Sigoli, M. Jafelicci Jr, and M.R. Davolos, “Luminescent Properties and Lattice Defects Correlation on Zinc Oxide”, *Int. J. Inorg. Mater.*, 3, 749 (2001).

¹⁸⁶Y. Du, W.L. Cai, C.M. Mo, J. Chen, L.D. Zhang, and X.G. Zhu, “Preparation and Photoluminescence of Alumina Membranes with Ordered Pore Arrays”, *Appl. Phys.*

Lett., 74, 2951(1999).

¹⁸⁷J. Wang, G. Du, Y. Zhang, B. Zhao, X. Yang, and D. Liu, “Luminescence Properties of ZnO Films Annealed in Growth Ambient and Oxygen”, *J. Cryst. Growth.*, 263, 269 (2004).

¹⁸⁸K. Vanheusden, W. L. Warren, C. H. Seager, D. R. Tallant, J. A. Voigt, and B. E. Gnade, “Mechanisms Behind Green Photoluminescence in ZnO Phosphor Powders”, *J. Appl. Phys.*, 79, 7983 (1996).

¹⁸⁹S. Y. Li, P. Lin, C. Y. Lee, T. Y. Tseng, and C. J. Huang, “Effect of Sn dopant on the properties of ZnO nanowires”, *J. Phys. D: Appl. Phys.*, 37, 2274 (2004).

¹⁹⁰S. H. Jo, D. Banerjee and Z. F. Ren, “Field Emission of Zinc Oxide Nanowires Grown on Carbon Cloth”, *Appl. Phys. Lett.*, 85, 1407 (2004).

¹⁹¹J.-M. Bonard, C. Klinke, K. A. Dean and B. F. Coll, “Degradation and Failure of Carbon Nanotube Field Emitters”, *Phys. Rev. B*, 67, 115406 (2003).

¹⁹²S. S. Chang, S. O. Yoon, H. J. Park, and A. Sakai, “Luminescence Properties of Zn Nanowires Prepared by Electrochemical Etching”, *Mater. Lett.*, 53, 432 (2002).

¹⁹³H. Z. Zhang, R. M. Wang and Y. W. Zhu, “Effect of Adsorbates on Field-Electron Emission from ZnO Nanoneedle Arrays”, *J. Appl. Phys.*, 96, 624 (2004).

¹⁹⁴C. Y. Lee, S. Y. Li, P. Lin, and T. Y. Tseng, “ZnO Nanowires Hydrothermally Grown on PET Polymer Substrates and Their Characteristics”, *J. Nanosci. Nanotech.*, 5, 1088 (2005).

¹⁹⁵C. Y. Lee, S. Y. Li, P. Lin, and T. Y. Tseng, “Electrical characterizations of controllable field emission triode based on low temperature synthesized ZnO nanowires”, *Nanotechnology*, 17, 83 (2006).