

Patent Selections:

The patents annotated in this section have been selected from various patent collections. They are recent patents categorized by different nanotechnology methods, process and techniques involved and related to nanotechnology and are relevant to the articles published in this journal issue.

NANOELECTRONICS

- Hutchison, J.E., Woehrle, G.H., Warner, M.G., Brown, L.O. Nanoparticles and method to control nanoparticle spacing *WO06127675 (2006)*.
- Gupta, V., Kireev, V.A. Glass-Modified stress waves for separation of ultra thin films and nanoelectronics device fabrication *EP1723401 (2006)*.
- Virtanen, J., Tilli, M., Keinaenen, P. Novel hybride materials and related methods and devices *WO06040398 (2006)*.
- Huang, H., Kajiura, H., Ata, M. Carbon nanotube and production method therefor and carbon nanotube producing device *EP1650161 (2006)*.
- Hutchison, J.E., Kearns, G.J. Silicon substrates with thermal oxide windows for transmission electron microscopy *WO06127736 (2006)*.
- Pradhan, N., Peng, X. Doped semiconductor nanocrystals and methods of making same *WO06116337 (2006)*.
- Schloegl, R., Sharifah, B.B.O.A.H. Nanosized carbon material-activated carbon composite *WO06108683 (2006)*.
- Capobianchi, A., Foglia, S., Imperatori, P. Process of filling nanotube structures, in particular carbon nanotubes *WO06103710 (2006)*.
- Larouche, F., Smiljanic, O., Stansfield, B.L. Methods and apparatuses for depositing nanometric filamentary structures *WO06099749 (2006)*.
- King, T.-J. Negative differential resistance (NDR) elements and memory device using the same *US20067098472 (2006)*.
- Carmeli, C., Carmeli, I., Prolov, L. Molecular optoelectronic device and method of fabricating the same *WO06090381 (2006)*.
- Hutchison, J.E., Inman, C.E., Kearns, G.J., Goto, S., Foster, E.W. Method for functionalizing surfaces *WO06124769 (2006)*.
- Nugent, A. Pattern recognition utilizing a nanotechnology-based neural network *US20067107252 (2006)*.
- Nugent, A. Utilized nanotechnology apparatus using a neural network, a solution and a connection gap *US20067039619 (2006)*.
- Nugent, A. Variable resistor apparatus formed utilizing nanotechnology *US20066995649 (2006)*.

MEDICAL NANOROBOTICS

- Belsky, Z., Peled, S. Prolonged transit time of permeability-enhancing drug eluting pill *WO06064503 (2006)*.
- Belsky, Z., Tsadkin-Tamir, M. Local delivery of drugs or substances using electronic permeability increase *WO06064502 (2006)*.
- Weber, J., Kocur, G.J., Helmus, M., Palasis, M. A method of making a coated medical device *WO06015386 (2006)*.

MOLECULAR MACHINE

- Zhe, Z., Cui, H., Pochiraju, K. Flexible parallel manipulator for nano-, meso- or macro-positioning with multi-degrees of freedom *WO06107664 (2006)*.
- Seeman, N.C., Liao, S., Canary, J., Zhong, H. A polynucleotide nanomechanical device that acts as an artificial ribosome and translates DNA signals into polymer assembly instructions *WO06017432 (2006)*.
- Parikh, A.N., Yee, C.K., Amweg, M.L. Direct micro-patterning of lipid bilayers using UV light and selected uses thereof *US20067132122 (2006)*.
- Noller, H.F., Cate, J.H.D., Yusupov, M.M., Yusupova, G.Z., Baucom, A.E., Lancaster, L., Dallas, A., Lieberman, K. X-ray crystal structures of functional ribosome complexes containing transfer RNA and model messenger RNAs and methods of use *US20067133783 (2006)*.

NANOMANUFACTURING DESIGN

- Fincher, R., Watkins, L. Controlled variable density fluid for wellbore operations *WO06012164 (2006)*.

CMOS

- Herner, S.B., Vyvoda, M.A. Low resistivity titanium silicide on heavily doped semiconductor *US20067144807 (2006)*.
- Harrison, R.M., Keeth, B. Method and circuitry for reducing duty cycle distortion in differential delay lines *US20067145376 (2006)*.
- Wang, Bin. Graded-junction high-voltage MOSFET in standard logic CMOS *US20067145203 (2006)*.
- Lule, T., Benthien, S. CMOS light sensing cell *US20067145123 (2006)*.
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- Smith, H.I., Barbastathis, G., Menon, R. Phase-Shift masked zone plate array lithography *WO06084230 (2006)*.

2. Jeans, A.H. Apparatus for embossing a flexible substrate with a pattern carried by an optically transparent compliant media *US20067070406 (2006)*.

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2. Prasad, P., Mazurchuk, R.V., Bharali, D., Sukumaran, D.K., Bergey, E.J., Spornyak, J.A., Seshadri, M. Hybrid inorganic nanoparticles, methods of using and methods of making *WO06105234 (2006)*.
3. Rosati, C.F. Method and apparatus for supplying gas to an area *WO2006089108 (2006)*.
4. Gilkey, J.C., Duesterhaus, M.A., Peter, F.J., Renn, R.A., Baker, M.S. Mechanical memory *US20067092272 (2006)*.
5. Li, N., Tan, W. An Intelligent nanomedicine integrating diagnosis and therapy *WO06019637 (2006)*.

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5. Sotirchos, E., Mitri, S. Catalysts for the large scale production of high purity carbon nanotubes with chemical vapor deposition *WO06087590 (2006)*.
6. Smalley, R.E., Wang, Y., Hauge, R.H., Shan, H. Purification of carbon nanotubes based on the chemistry of Fenton's reagent *WO06072085 (2006)*.
7. Keller, T., Laskoski, M. Highly aromatic compounds and polymers as precursors to carbon nanotube and metal nanoparticle compositions in shaped solids *WO06068825 (2006)*.

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1. Halas, N.J., Radloff, C.J. Multi-layer nanoshells comprising a metallic or conducting shell *US20067144627 (2006)*.
2. Lee, S.-S., Park, H., Cho, H., Lim, S.-K., Ko, J.-S. Apparatus and method for generating optical carrier for microwave and millimeterwave photonics system *US20067142570 (2006)*.
3. Wu, P., Dalakos, G., Lorraine, P., Lawrence, B. Long-wavelength infra-red night vision goggles *EP1724623 (2006)*.
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5. Niu, C., Daniels, R.H., Dubrow, R.S., Goldman, J.L. Nanostructured thin films and their uses *WO06118595 (2006)*.
6. Shelnutt, J.A., Medforth, C.J., Wang, Z. Hetero-porphyrin nanotubes and composites *US20067132163 (2006)*.
7. Van Veggel, F.C.J.M., Thampi, S.V., Srisivakumar. Production of light from sol-gel derived thin films made with lanthanide doped nanoparticles, and preparation thereof *WO06113998 (2006)*.
8. Kyushima, H., Shimoi, H., Kageyama, A., Inoue, K., Ito, M. Photomultiplier and its manufacturing method *EP1717843 (2006)*.
9. Lieber, C.M., Park, H., Wei, Q., Cui, Yi., Liang, W. Nanosensors *US20067129554 (2006)*.
10. Tabuchi, H. Optical demultiplexing device and optical monitoring device *US20067130504 (2006)*.

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3. Braun, A., Kang, Y.G., Limmer, W., Muhlschlegel, J. Electronic ballast having resonance excitation for generating a transfer voltage *US20067145293 (2006)*.
4. Vinciarelli, P. Point of load sine amplitude converters and methods *US20067145786 (2006)*.
5. Perlman, S.G. System and method for powering a vehicle using radio frequency generators *WO06127185 (2006)*.
6. Harker, B. A building crack monitoring device *WO06120435 (2006)*.
7. Stephen L. Energy generating device and method *WO06117551 (2006)*.
8. Hassler Jr. W.L., Dlugos Jr. D.F. Remotely adjustable artificial sphincter *EP1719480 (2006)*.

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1. Fernandez-Ceballos, S., Manai, G., Shvets, I.V. Method of forming conducting nanowires *WO06125825 (2006)*.
2. Radican, K., Berdunov, N., Shvets, I.V., Murphy, S. Electrically conducting nanowires *WO06125826 (2006)*.
3. Freeman, A., Shacham-Diamand, Y., Vernick, S., Moscovich-Dagan, H. Biologically active metal-coated proteins *WO06123343 (2006)*.
4. Duan, X., Niu, C., Empedocles, S.A., Romano, L.T., Chen, J., Sahi, V., Bock, L.A., Stumbo, D.P., Wallace, P.J., Goldman, J.L. Large-area nanoenabled macro-electronic substrates and uses therefore *US20067135728 (2006)*.

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7. Zhang, F., Barrowcliff, R.A., Stecker, G.M., Hsu, S.T. Iridium oxide nanotubes and method for forming same **US20067098144 (2006)**.
8. Chen, Y., Williams, R.S. Electric device having nanoscale wires and gaps **US20067087946 (2006)**.
9. Freeman, A., Shacham-Diamand, Y., Moscovich-Dagan, H., Hadar, N. Biologically active silver-coated proteins **WO06080017 (2006)**.
10. Klaehn, J.R., Peterson, E.S., Orme, C.J., Jones, M.G., Wertsching, A.K., Luther, T.A., Trowbridge, T.L. Polybenzimidazole compounds, polymeric media, and methods of post-polymerization modifications **WO06043992 (2006)**.
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12. Chen, Y., Williams, R.S. Method for making nanoscale wires and gaps for switches and transistors **US20066998333 (2006)**.
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18. Heller, M., Sullivan, B., Dehlinger, D. Nanofabrication processes and devices for the controlled assembly of functionalized nanostructures **WO06122317 (2006)**.
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20. Pan, Y., Leon, F.A., Stumbo, D.P. Fully integrated organic layered processes for making plastic electronics based on conductive polymers and semiconductor nanowires **WO06124055 (2006)**.
21. Reich, D., Meyer, G., Chien, C.-L., Chen, C., Searson, P.C. Multifunctional magnetic nanowires **US20067132275 (2006)**.
22. Yi, S.S. Method of growing semiconductor nanowires with uniform cross-sectional area using chemical vapor deposition **US20067129154 (2006)**.
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24. Lovley, D.R., Reguera, G., McCarthy, K.D., Tuominen, M.T. Microbial nanowires, related systems and methods of fabrication **WO06096821 (2006)**.
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33. Tseng, H.-R., Wang, J., Alam, M., Guo, Y. Electrochemically fabricated conducting polymer nanowire sensors **WO06042276 (2006)**.
34. Humphrey, T.E. Reversible thermoelectric nanomaterials **WO06005126 (2006)**.
35. Hierold, C., Stampfer, C., Jungen, A. Manufacturing method for the integration of nanostructures into microchips **WO06125457 (2006)**.
36. Min, M.-K., Park, C.-H., Kim, H.-A., Kwak, C., Kweon, H.-J., Kim, H.-S., Catalyst for fuel cell, method for preparing the same, and membrane-electrode assembly and fuel cell system comprising the same **EP1653535 (2006)**.
37. Demers, L. Apparatus, materials, and methods for fabrication and catalysis **US20067098056 (2006)**.
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FUNCTIONAL MAPPING

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