

## REFERENCES

- [1] C. M. Niemeyer, "Nanoparticles, Proteins, and Nucleic Acids: Biotechnology Meets Material Science," *Angew. Chem. Int. Ed.*, vol. 40, pp. 4128-4158, 2001.
- [2] H. Hiramatsu, F. E. Osterloh, "pH-Controlled Assembly and Disassembly of Electrostatically Linked CdSe-SiO<sub>2</sub> and Au-SiO<sub>2</sub> Nanoparticle Clusters," *Langmuir*, vol. 19, pp. 7003-7011, 2003.
- [3] Z. Tang, Y. Wang, N. A. Kotov, "Semiconductor Nanoparticles on Solid Substrates: Film Structure, Intermolecular Interactions, and Polyelectrolyte Effects," *Langmuir*, vol. 18, pp. 7035-7040, 2002.
- [4] J. J. Storhoff, Robert Elghanian, R. C. Mucic, C. A. Mirkin, R. L. Letsinger, "One-Pot Colorimetric Differential of Polynucleotides with Single Base Imperfections Using Gold Nanoparticles Probes," *J. Am. Chem. Soc.*, vol. 120, pp. 1959-1964, 1997.
- [5] Z. A. Peng, X. Peng, "Formation of High-Quality CdTe, CdSe, and CdS Nanocrystals Using CdO as Precursor," *J. Am. Chem. Soc.*, vol. 123, pp. 183-184, 2000.
- [6] S. J. Rosenthal, I. Tomlinson, E. M. Adkins, S. Schroeter, S. Adams, L. Swafford, J. McBride, Y. Wang, L. J. DeFelice, R. D. Blakely, "Targeting Cell Surface Receptors with Ligand-Conjugated Nanocrystals," *J. Am. Chem. Soc.*, vol. 124, pp. 4586-4594, 2001.
- [7] J. Zheng, Z. Zhu, H. Chen, Z. Liu, "Nanopatterned Assembling of Colloidal Gold Nanoparticles on Silicon," *Langmuir*, vol. 16, pp. 4409-4412, 2000.
- [8] C. Y. Wu, Y. K. Li, C. C. Tu, "A New Photo-Sensing Nano-Device Structure with CdSe and Au Nanoparticles on Silicon Substrate," *Third IEEE Conference on Nanotechnology*, vol. 2, pp. 763-765, 2003.
- [9] M. C. Beard, G. M. Turner, C. A. Schmuttenmaer, "Size-Dependent Photoconductivity in CdSe Nanoparticles as Measured by Time-Resolved Terahertz Spectroscopy," *Nano Lett*, vol. 2, pp. 983-987, 2002.
- [10] E. Hao, H. Sun, Z. Zhou, J. Liu, B. Yang, J. Shen, "Synthesis and Optical Properties of CdSe and CdSe/CdS Nanoparticles," *Chem. Mater*, vol. 11, pp. 3096-3102, 1999.
- [11] A. P. Alivisatos, "Perspectives on the Physical Chemistry of Semiconductor Nanocrystals," *J. Phys. Chem.*, vol. 100, pp.13226-13239, 1996.
- [12] W. P. McConnell, J. P. Novak, L. C. Brousseau III, R. R. Fuierer, R. C. Tenent, D. L. Feldheim, "Electronic and Optical Properties of Chemically Modified Metal Nanoparticles and Molecularly Bridged Nanoparticle Arrays," *J. Phys. Chem. B*, vol. 104, pp. 8925-8930, 2000.
- [13] D. J. Pena, J. K. N. Mbindyo, A. J. Carado, T. E. Mallouk, C. D. Keating, B. Razavi, T. S. Mayer, "Template Growth of Photoconductive Metal-CdSe-Metal Nanowires," *J. Phys. Chem. B*, vol. 106, pp. 7458-7462, 2002.

- [14] C. Y. Wu, Y. K. Li, T. M. Chen, C. C. Tu, "The Design and Fabrication of Photo-Sensing Nanodevice Structure with CdSe and Au Nanoparticles on Silicon Substrate," *IEEE Journal of Transactions on Nanotechnology*, vol. 5, no. 3, pp. 284-290, 2006.
- [15] D.B. Janes, TAKHEE Lee, JIA Liu, "Self-Assembly Metal/Molecule/Semiconductor Nanostructures for Electronic Device and Contact Applications," *J. Electron. Mater.*, 2000
- [16] Yamada, K.; Hoshino, K.; Matsumoto, K.; Shimoyama, I., "Electro-static trapping and deposition of nanoparticles in a submicron narrow gap for a lateral-electrode LED," *17<sup>th</sup> IEEE Conference on MEMS*, pp. 49-52, 2004
- [17] Sungho Park, Sung-Wook Chung, Chad A. Mirkin, "Hybird Organic-Inorganic, Rod-Shaped Nanoresistors and Diodes," *J. Am. Chem. Soc.*, vol. 126, pp. 11772-11773, 2004
- [18] Lawrence L. Kazmerski, "Solar photovoltaics R&D at the tipping point: A 2005 technology overview," *Journal of Electron Spectroscopy and Related Phenomena*, vol. 150, pp. 105-135, 2006
- [19] Istvan Robel, Vaidyanathan Subramanian, Masaru Kuno, and Prashant V. Kamat, "Quantum Dot Solar Cells. Harvesting Light Energy with CdSe Nanocrystals Molecularly Linked to Mesoscopic TiO<sub>2</sub> Films," *J. Phys. Chem. Soc.*, vol. 128, pp. 2385-2393, 2006.
- [20] C Burda, T. C. Green, S. Link, M. A. El-Sayed, "Electron Shuttling Across the Interface of CdSe Nanoparticles Monitored by Femtosecond Laser Spectroscopy," *J. Phys. Chem. B.*, vol. 103, pp. 1783-1788, 1998.
- [21] R. R. Mehta, B. S. Sharma, "Photoconductive Gain Greater than Utility in CdSe Films with Schottky Barriers at the Contacts," *J. Appl. Phys.*, vol. 44, No. 1, pp. 325-328, 1973.
- [22] P. KR. Kalita, B. K. Sarma, H. L. Das, "Space Charge Limited Conduction in CdSe Thin Films," *Bull. Mater. Sci.*, vol. 26, No. 6, pp. 613-617, 2003.
- [23] X. G. Peng, L. Manna, W. D. Yang, J. Wickham, E. Scher, A. Kadavanich, A. P. Alivisatos, "Shape control of CdSe nanocrystals," *Nature*, vol. 404, pp. 59-61, 2000.
- [24] A. M. Hines, P. Guyot-Sionnest, "Synthesis and characterization of strongly luminescing ZnS-capped CdSe nanocrystals," *J. Phys. Chem*, vol. 100, pp. 468-471, 1996.
- [25] Dabbousi, B. O.; Rodriguez-Viejo, J.; Mikulec, F. V.; Heine, J. R.; Mattoussi, H.; Ober, R.; Jensen, K. F.; Bawendi, M. G., "(CdSe)ZnS Core-Shell Quantum Dots: Synthesis and Characterization of a Size Series of Highly Luminescent Nanocrystallites," *J. Phys. Chem. B.*, vol. 101, pp. 9463-9475, 1997.
- [26] Yu, W. W.; Qu, L. H.; Guo, W. Z.; Peng, X. G. "Experimental Determination of the Extinction Coefficient of CdTe, CdSe, and CdS Nanocrystals," *Chem. Mater*, vol. 15, pp. 2854-2860, 2003.
- [27] Luis M. Liz-Marzan, "Nanometals: formation and color," *Elsevier*, ISSN: 1369 7021.

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論 文：

以硒化鎘/硫化鋅與金奈米粒子建構先進之光感測元件

Advanced Nanodevice Structures with CdSe/ZnS and/or Au  
Nanoparticles for Photo-Sensing Applications

