

Literature list/links for fluorescent semiconductor NCs in biology

(some files may require an institutional or individual subscription to the journal)

Solubilization / Functionalization

M. Bruchez, M. Moronne, P. Gin, S. Weiss, A. P. Alivisatos, **Semiconductor nanocrystals as fluorescent biological labels** *Science* **281**, 2013-2016 (SEP 25, 1998).

www.sciencemag.org/cgi/content/full/281/5385/2013

W. C. W. Chan, S. M. Nie, **Quantum dot bioconjugates for ultrasensitive nonisotopic detection** *Science* **281**, 2016-2018 (1998).

<http://www.nielab.org/docs/QD-Science.pdf>

G. P. Mitchell, C. A. Mirkin, R. L. Letsinger, **Programmed assembly of DNA functionalized quantum dots** *J. Am. Chem. Soc.* **121**, 8122-8123 (1999).

<http://pubs.acs.org/cgi-bin/archive.cgi/jacsat/1999/121/i35/pdf/ja991662v.pdf>

H. Mattoussi *et al.*, **Self-assembly of CdSe-ZnS quantum dot bioconjugates using an engineered recombinant protein** *J. Am. Chem. Soc.* **122**, 12142-12150 (2000).

<http://pubs.acs.org/cgi-bin/article.cgi/jacsat/2000/122/i49/pdf/ja002535y.pdf>

J. Aldana, Y. A. Wang, X. G. Peng, **Photochemical instability of CdSe nanocrystals coated by hydrophilic thiols** *J. Am. Chem. Soc.* **123**, 8844-8850 (SEP 12, 2001).

<http://pubs.acs.org/cgi-bin/article.cgi/jacsat/2001/123/i36/pdf/ja016424q.pdf>

D. Gerion *et al.*, **Synthesis and properties of biocompatible water-soluble silica-coated CdSe/ZnS semiconductor quantum dots** *J. Phys. Chem. B* **105**, 8861-8871 (2001).

<http://pubs.acs.org/cgi-bin/article.cgi/jpcbfc/2001/105/i37/pdf/jp0105488.pdf>

N. N. Mamedova, N. A. Kotov, A. L. Rogach, J. Studer, **Albumin-CdTe nanoparticle bioconjugates: preparation, structure and interunit energy transfer with antenna effect** *Nano Lett.* **1**, 282-286 (2001).

<http://pubs.acs.org/cgi-bin/article.cgi/nalefd/2001/1/i06/pdf/nl015519n.pdf>

H. Mattoussi *et al.*, **Bioconjugation of highly luminescent colloidal CdSe-ZnS quantum dots with an engineered two-domain recombinant protein** *Physica Status Solidi B-Basic Research* **224**, 277-283 (MAR, 2001).

<http://www3.interscience.wiley.com/cgi-bin/fulltext/89014159/PDFSTART>

S. Pathak, S. K. Choi, N. Arnheim, M. E. Thompson, **Hydroxylated quantum dots as luminescent probes for in situ hybridization** *J. Am. Chem. Soc.* **123**, 4103-4104 (2001).

<http://pubs.acs.org/cgi-bin/article.cgi/jacsat/2001/123/i17/pdf/ja0058334.pdf>

Y. F. Chen, Z. Rosenzweig, **Luminescent CdSe quantum dot doped stabilized micelles** *Nano Lett.* **2**, 1299-1302 (NOV, 2002).

<http://pubs.acs.org/cgi-bin/article.cgi/nalefd/2002/2/i11/pdf/nl025767z.pdf>

B. Dubertret *et al.*, **In vivo imaging of quantum dots encapsulated in phospholipid micelles** *Science* **298**, 1759-1762 (2002).

<http://www.sciencemag.org/cgi/reprint/298/5599/1759.pdf>

S. J. Rosenthal *et al.*, **Targeting cell surface receptors with ligand-conjugated nanocrystals** *J. Am.*

Chem. Soc. **124**, 4586-4594 (2002).

<http://pubs.acs.org/cgi-bin/article.cgi/jacsat/2002/124/i17/pdf/ja003486s.pdf>

A. Schroedter, H. Weller, R. Eritja, W. E. Ford, J. M. Wessels, **Biofunctionalization of silica-coated CdTe and gold nanocrystals** *Nano Lett.* **2**, 1363-1367 (DEC, 2002).

<http://pubs.acs.org/cgi-bin/article.cgi/nalefd/2002/2/i12/pdf/nl025779k.pdf>

Y. A. Wang, J. J. Li, H. Y. Chen, X. G. Peng, **Stabilization of inorganic nanocrystals by organic dendrons** *J. Am. Chem. Soc.* **124**, 2293-2298 (MAR 13, 2002).

<http://pubs.acs.org/cgi-bin/article.cgi/jacsat/2002/124/i10/pdf/ja016711u.pdf>

C. X. Zhang, S. O'Brien, L. Balogh, **Comparison and stability of CdSe nanocrystals covered with amphiphilic poly(amidoamine) dendrimers** *J. Phys. Chem. B* **106**, 10316-10321 (OCT 10, 2002).

<http://pubs.acs.org/cgi-bin/article.cgi/jpcbfk/2002/106/i40/pdf/jp014241k.pdf>

Y. F. Chen, T. H. Ji, Z. Rosenzweig, **Synthesis of glyconanospheres containing luminescent CdSe-ZnS quantum dots** *Nano Lett.* **3**, 581-584 (MAY, 2003).

<http://pubs.acs.org/cgi-bin/article.cgi/nalefd/2003/3/i05/pdf/nl034086g.pdf>

C. A. Constantine *et al.*, **Layer-by-layer biosensor assembly incorporating functionalized quantum dots** *Langmuir* **19**, 9863-9867 (NOV 11, 2003).

<http://pubs.acs.org/cgi-bin/article.cgi/langd5/2003/19/i23/pdf/la035237y.pdf>

C. A. Constantine *et al.*, **Layer-by-layer films of chitosan, organophosphorus hydrolase and thioglycolic acid-capped CdSe quantum dots for the detection of paraoxon** *J. Phys. Chem. B* **107**, 13762-13764 (DEC 18, 2003).

<http://pubs.acs.org/cgi-bin/article.cgi/jpcbfk/2003/107/i50/pdf/jp036381v.pdf>

W. H. Guo, J. J. Li, Y. A. Wang, X. G. Peng, **Luminescent CdSe/CdS core/shell nanocrystals in dendron boxes: Superior chemical, photochemical and thermal stability** *J. Am. Chem. Soc.* **125**, 3901-3909 (2003).

<http://pubs.acs.org/cgi-bin/article.cgi/jacsat/2003/125/i13/pdf/ja028469c.pdf>

W. Z. Guo, J. J. Li, Y. A. Wang, X. G. Peng, **Conjugation chemistry and bioapplications of semiconductor box nanocrystals prepared via dendrimer bridging** *Chem. Mater.* **15**, 3125-3133 (2003).

<http://pubs.acs.org/cgi-bin/article.cgi/cmatex/2003/15/i16/pdf/cm034341y.pdf>

S. Kim, M. G. Bawendi, **Oligomeric Ligands for luminescent and stable nanocrystal quantum dots** *J. Am. Chem. Soc.* **125**, 14652-14653 (2003).

<http://pubs.acs.org/cgi-bin/article.cgi/jacsat/2003/125/i48/pdf/ja0368094.pdf>

A. Sukhanova *et al.*, **Biocompatible fluorescent nanocrystals for immunolabeling of membrane proteins and cells** *Anal. Biochem.* **324**, 60-67 (2004).

http://www.sciencedirect.com/science?_ob=MIimg&_imagekey=B6W9V-4B1XPHV-F-R&_cdi=6692&_orig=search&_coverDate=01%2F01%2F2004&_sk=996759998&_view=c&_wchp=dGLbVzz-zSkWA&_acct=C000000152&_version=1&_userid=4423&_md5=85a60ee7362c43737a533849db3c0922&_ie=f.pdf

V. A. Sinani *et al.*, **Collagen coating promotes biocompatibility of semiconductor nanoparticles in stratified LBL films** *Nano Lett.* **3**, 1177-1182 (SEP, 2003).

<http://pubs.acs.org/cgi-bin/article.cgi/nalefd/2003/3/i09/pdf/nl0255045.pdf>

T. Pellegrino *et al.*, **Hydrophobic nanocrystals coated with an amphiphilic polymer shell: A general route to water soluble nanocrystals** *Nano Lett.* **4**, 703-707 (2004).

<http://pubs.acs.org/cgi-bin/article.cgi/nalefd/2004/4/i04/pdf/nl035172j.pdf>

F. Pinaud, D. King, H.-P. Moore, S. Weiss, **Bioactivation and Cell Targeting of Semiconductor CdSe/ZnS Nanocrystals with Phytochelatin-Related Peptides** *J. Am. Chem. Soc.* **126**, 6115-6123 (2004).

<http://pubs.acs.org/cgi-bin/article.cgi/jacsat/2004/126/i19/pdf/ja031691c.pdf>

S. Y. Ding *et al.*, **Quantum dot molecules assembled with genetically engineered proteins** *Nano Lett.* **3**, 1581-1585 (2003).

<http://pubs.acs.org/cgi-bin/article.cgi/nalefd/2003/3/i11/pdf/nl034578t.pdf>

R. Hong *et al.*, **Control of protein structure and function through surface recognition by tailored nanoparticle scaffolds** *J. Am. Chem. Soc.* **126**, 739-743 (2004).

<http://pubs.acs.org/cgi-bin/article.cgi/jacsat/2004/126/i03/pdf/ja037470o.pdf>

R. Wargnier *et al.*, **Energy transfer in aqueous solutions of oppositely charged CdSe/ZnS core/shell quantum dots and in quantum dot-nanogold assemblies** *Nano Lett.* **4**, 451-457 (MAR, 2004).

<http://pubs.acs.org/cgi-bin/article.cgi/nalefd/2004/4/i03/pdf/nl0350938.pdf>

Immunofluorescence / DNA arrays

G. P. Mitchell, C. A. Mirkin, R. L. Letsinger, **Programmed assembly of DNA functionalized quantum dots** *J. Am. Chem. Soc.* **121**, 8122-8123 (1999).

<http://pubs.acs.org/cgi-bin/archive.cgi/jacsat/1999/121/i35/pdf/ja991662v.pdf>

M. Y. Han, X. H. Gao, J. Z. Su, S. Nie, **Quantum-dot-tagged microbeads for multiplexed optical coding of biomolecules** *Nature Biotechnol.* **19**, 631-635 (JUL, 2001).

http://www.nielab.org/docs/qd_bead_Nature.pdf

H. Mattoussi *et al.*, **Bioconjugation of highly luminescent colloidal CdSe-ZnS quantum dots with an engineered two-domain recombinant protein** *Physica Status Solidi B-Basic Research* **224**, 277-283 (MAR, 2001).

<http://www3.interscience.wiley.com/cgi-bin/fulltext/89014159/PDFSTART>

S. Pathak, S. K. Choi, N. Arnheim, M. E. Thompson, **Hydroxylated quantum dots as luminescent probes for in situ hybridization** *J. Am. Chem. Soc.* **123**, 4103-4104 (2001).

<http://pubs.acs.org/cgi-bin/article.cgi/jacsat/2001/123/i17/pdf/ja0058334.pdf>

D. M. Willard, L. L. Carillo, J. Jung, A. Van Orden, **CdSe-ZnS quantum dots as resonance energy transfer donors in a model protein-protein binding assay** *Nano Lett.* **1**, 469-474 (2001).

<http://pubs.acs.org/cgi-bin/article.cgi/nalefd/2001/1/i09/pdf/nl015565n.pdf>

J. O. Winter, T. Y. Liu, B. A. Korgel, C. E. Schmidt, **Recognition Molecule Directed Interfacing Between Semiconductor Quantum Dots and Nerve Cells** *Adv. Mater.* **13**, 1673-1677 (2001).

<http://www3.interscience.wiley.com/cgi-bin/fulltext/86512008/PDFSTART>

M. Dahan *et al.*, **Time-gated biological imaging by use of colloidal quantum dots** *Optics Lett.* **26**, 825-827 (2001).

<http://www.opticsinfobase.org/ViewMedia.cfm?id=64384&seq=0>

D. Y. Wang, A. L. Rogach, F. Caruso, **Semiconductor quantum dot-labeled microsphere bioconjugates prepared by stepwise self-assembly** *Nano Lett.* **2**, 857-861 (AUG, 2002).

<http://pubs.acs.org/cgi-bin/article.cgi/nalefd/2002/2/i08/pdf/nl025624c.pdf>

D. Gerion *et al.*, **Sorting fluorescent nanocrystals with DNA** *J. Am. Chem. Soc.* **124**, 7070-7074

(2002).

<http://pubs.acs.org/cgi-bin/article.cgi/jacsat/2002/124/i24/pdf/ja017822w.pdf>

E. R. Goldman *et al.*, **Conjugation of luminescent quantum dots with antibodies using an engineered adaptor protein to provide new reagents for fluoroimmunoassays** *Anal. Chem.* **74**, 841-847 (2002).

<http://pubs.acs.org/cgi-bin/article.cgi/ancham/2002/74/i04/pdf/ac010662m.pdf>

E. R. Goldman *et al.*, **Avidin: A natural bridge for quantum dot-antibody conjugates** *J. Am. Chem. Soc.* **124**, 6378-6382 (2002).

<http://pubs.acs.org/cgi-bin/article.cgi/jacsat/2002/124/i22/pdf/ja0125570.pdf>

E. R. Goldman *et al.*, **Luminescent quantum dot-adaptor protein-antibody conjugates for use in fluoroimmunoassays** *Physica Status Solidi B-Basic Research* **229**, 407-414 (JAN, 2002).

<http://www3.interscience.wiley.com/cgi-bin/fulltext/89014155/PDFSTART>

W. J. Parak *et al.*, **Conjugation of DNA to silanized colloidal semiconductor nanocrystalline quantum dots** *Chem. Mater.* **14**, 2113-2119 (2002).

<http://pubs.acs.org/cgi-bin/article.cgi/cmaterx/2002/14/i05/pdf/cm0107878.pdf>

C. A. Constantine *et al.*, **Layer-by-layer biosensor assembly incorporating functionalized quantum dots** *Langmuir* **19**, 9863-9867 (NOV 11, 2003).

<http://pubs.acs.org/cgi-bin/article.cgi/langd5/2003/19/i23/pdf/la035237y.pdf>

C. A. Constantine *et al.*, **Layer-by-layer films of chitosan, organophosphorus hydrolase and thioglycolic acid-capped CdSe quantum dots for the detection of paraoxon** *J. Phys. Chem. B* **107**, 13762-13764 (DEC 18, 2003).

<http://pubs.acs.org/cgi-bin/article.cgi/jpcbfc/2003/107/i50/pdf/jp036381v.pdf>

P. T. Tran, E. R. Goldman, G. P. Anderson, J. M. Mauro, H. Mattoussi, **Use of luminescent CdSe-ZnS nanocrystal bioconjugates in quantum dot-based nanosensors** *Physica Status Solidi B-Basic Research* **229**, 427-432 (JAN, 2002).

<http://www3.interscience.wiley.com/cgi-bin/fulltext/89014159/PDFSTART>

S. P. Wang, N. Mamedova, N. A. Kotov, W. Chen, J. Studer, **Antigen/antibody immunocomplex from CdTe nanoparticle bioconjugates** *Nano Lett.* **2**, 817-822 (AUG, 2002).

<http://pubs.acs.org/cgi-bin/article.cgi/nalefd/2002/2/i08/pdf/nl0255193.pdf>

J. Feng *et al.*, **Functionalized europium oxide nanoparticles used as a fluorescent label in an immunoassay for atrazine** *Anal. Chem.* **75**, 5282-5286 (OCT 1, 2003).

<http://pubs.acs.org/cgi-bin/article.cgi/ancham/2003/75/i19/pdf/ac034063m.pdf>

K. Hanaki *et al.*, **Semiconductor quantum dot/albumin complex is a long-life and highly photostable endosome marker** *Biochem. Biophys. Res. Comm.* **302**, 496-501 (2003).

http://www.sciencedirect.com/science?_ob=MIimg&_imagekey=B6WBK-47YH4KH-D-H&_cdi=6713&_orig=browse&_coverDate=03%2F14%2F2003&_sk=996979996&_view=c&_wchp=dGLbVlz-zSkzS&_acct=C000000152&_version=1&_userid=4423&_md5=dc4c81b09fe30b1993175dc273b0e848&_ie=f.pdf

Z. Kaul *et al.*, **Mortalin imaging in normal and cancer cells with quantum dot immuno-conjugates** *Cell Research* **13**, 503-507 (DEC, 2003).

<http://www.cell-research.com/currentissue/pdfs/wadhwa.pdf>

B. M. Lingerfelt, H. Mattoussi, E. R. Goldman, J. M. Mauro, G. P. Anderson, **Preparation of quantum dot-biotin conjugates and their use in immunochromatography assays** *Anal. Chem.* **75**, 4043-4049 (2003).

- <http://pubs.acs.org/cgi-bin/article.cgi/ancham/2003/75/i16/pdf/ac034139e.pdf>
- I. L. Medintz *et al.*, **Self-assembled nanoscale biosensors based on quantum dot FRET donors** *Nature Mater.* **2**, 630-638 (2003).
<http://www.nature.com/cgi-taf/DynaPage.taf?file=/nmat/journal/v2/n9/full/nmat961.html&filetype=PDF>
- J. M. Ness, R. S. Akhtar, C. B. Latham, K. A. Roth, **Combined tyramide signal amplification and quantum dots for sensitive and photostable immunofluorescence detection** *J. of Histochem. Cytochem.* **51**, 981-987 (2003).
http://www.jhc.org/cgi/reprint/51/8/981?maxtoshow=&HITS=10&hits=10&RESULTFORMAT=&author1=ness&searchid=1091567891681_1429&stored_search=&FIRSTINDEX=0&sortspec=relevance&journalcode=jhc
- F. Patolsky *et al.*, **Lighting-up the dynamics of telomerization and DNA replication by CdSe-ZnS quantum dots** *J. Am. Chem. Soc.* **125**, 13918-13919 (2003).
<http://pubs.acs.org/cgi-bin/article.cgi/jacsat/2003/125/i46/pdf/ja035848c.pdf>
- F. Tokumasu, J. Dvorak, **Development and application of quantum dots for immunocytochemistry of human erythrocytes** *J. Microsc.* **211**, 256-61 (2003).
http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=12950474
- X. Y. Wu *et al.*, **Immunofluorescent labeling of cancer marker Her2 and other cellular targets with semiconductor quantum dots** *Nature Biotechnol.* **21**, 41-46 (2003).
<http://www.nature.com/cgi-taf/DynaPage.taf?file=/nbt/journal/v21/n1/full/nbt764.html&filetype=PDF>
- H. X. Xu *et al.*, **Multiplexed SNP genotyping using the Qbead (TM) system: a quantum dot-encoded microsphere-based assay** *Nucleic Acids Res.* **31** (Apr 15, 2003).
http://nar.oupjournals.org/cgi/reprint/31/8/e43?maxtoshow=&HITS=10&hits=10&RESULTFORMAT=&author1=xu&andorexacttitle=and&andorexacttitleabs=and&andorexactfulltext=and&searchid=1091503025525_5574&stored_search=&FIRSTINDEX=0&sortspec=relevance&volume=31&journalcode=nar
- G. D. Bachand *et al.*, **Assembly and transport of nanocrystal CdSe quantum dot nanocomposites using microtubules and kinesin motor proteins** *Nano Lett.* **4**, 817-821 (MAY, 2004).
<http://pubs.acs.org/cgi-bin/article.cgi/nalefd/2004/4/i05/pdf/nl049811h.pdf>
- E. R. Goldman *et al.*, **Multiplexed toxin analysis using four colors of quantum dot fluororeagents** *Anal. Chem.* **76**, 684-688 (2004).
<http://pubs.acs.org/cgi-bin/article.cgi/ancham/2004/76/i03/pdf/ac035083r.pdf>
- R. Hong *et al.*, **Control of protein structure and function through surface recognition by tailored nanoparticle scaffolds** *J. Am. Chem. Soc.* **126**, 739-743 (2004).
<http://pubs.acs.org/cgi-bin/article.cgi/jacsat/2004/126/i03/pdf/ja037470o.pdf>
- A. Mansson *et al.*, **In vitro sliding of actin filaments labelled with single quantum dots** *Biochem. Biophys. Res. Commun.* **314**, 529-34 (2004).
http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=14733939
- I. L. Medintz, S. A. Trammel, H. Mattoussi, J. M. Mauro, **Reversible modulation of quantum dot photoluminescence using a protein-bound photochromic fluorescence resonance energy transfer acceptor** *J. Am. Chem. Soc.* **126**, 30-31 (2004).

<http://pubs.acs.org/cgi-bin/sample.cgi/jacsat/2004/126/i01/pdf/ja037970h.pdf>

I. L. Medintz *et al.*, **A fluorescence resonance energy transfer-derived structure of a quantum dot-protein bioconjugate nanoassembly** *Proceedings of the National Academy of Sciences of the United States of America* **101**, 9612-9617 (JUN 29, 2004).

<http://www.pnas.org/cgi/reprint/101/26/9612.pdf>

S. P. Mulvaney, H. M. Mattoussi, L. J. Whitman, **Incorporating fluorescent dyes and quantum dots into magnetic microbeads for immunoassays** *Biotechniques* **36**, 602-+ (APR, 2004).

Y. Xiao, P. E. Barker, **Semiconductor nanocrystal probes for human metaphase chromosomes** *Nucleic Acids Res.* **32**, e28 (2004).

http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=14960711

L. Zhu, S. Ang, W. T. Liu, **Quantum dots as a novel immunofluorescent detection system for *Cryptosporidium parvum* and *Giardia lamblia*** *Appl. Environ. Microbiol.* **70**, 597-8 (2004).

<http://aem.asm.org/cgi/reprint/70/1/597>

Live Cell Imaging

W. J. Parak *et al.*, **Cell motility and metastatic potential studies based on quantum dot imaging of phagokinetic tracks** *Adv. Mat.* **14**, 882-885 (2002).

<http://www3.interscience.wiley.com/cgi-bin/fulltext/94518241/PDFSTART>

J. K. Jaiswal, H. Mattoussi, J. M. Mauro, S. M. Simon, **Long-term multiple color imaging of live cells using quantum dot bioconjugates** *Nature Biotechnol.* **21**, 47-51 (JAN, 2003).

<http://www.nature.com/cgi-taf/DynaPage.taf?file=/nbt/journal/v21/n1/full/nbt767.html&filetype=PDF>

V. A. Sinani *et al.*, **Collagen coating promotes biocompatibility of semiconductor nanoparticles in stratified LBL films** *Nano Lett.* **3**, 1177-1182 (SEP, 2003).

<http://pubs.acs.org/cgi-bin/article.cgi/nalefd/2003/3/i09/pdf/nl0255045.pdf>

A. M. Derfus, W. C. W. Chan, S. N. Bhatia, **Intracellular delivery of quantum dots for live cell labeling and organelle tracking** *Adv. Mat.* **16**, 961-+ (JUN 17, 2004).

<http://www3.interscience.wiley.com/cgi-bin/fulltext/108566376/PDFSTART>

D. S. Lidke *et al.*, **Quantum dot ligands provide new insights into erbB/HER receptor-mediated signal transduction** *Nature Biotechnol.* **22**, 198-203 (2004).

<http://www.nature.com/cgi-taf/DynaPage.taf?file=/nbt/journal/v22/n2/full/nbt929.html&filetype=PDF>

F. Pinaud, D. King, H.-P. Moore, S. Weiss, **Bioactivation and Cell Targeting of Semiconductor CdSe/ZnS Nanocrystals with Phytochelatin-Related Peptides** *J. Am. Chem. Soc.* **126**, 6115-6123 (2004).

<http://pubs.acs.org/cgi-bin/article.cgi/jacsat/2004/126/i19/pdf/ja031691c.pdf>

F. Osaki, T. Kanamori, S. Sando, T. Sera, Y. Aoyama, **A Quantum Dot Conjugated Sugar Ball and Its Cellular Uptake. On the Size Effects of Endocytosis in the Subviral Region** *J. Am. Chem. Soc.* **126**, 6520-6521 (2004).

<http://pubs.acs.org/cgi-bin/article.cgi/jacsat/2004/126/i21/pdf/ja048792a.pdf>

L. C. Mattheakis *et al.*, **Optical coding of mammalian cells using semiconductor quantum dots** *Anal. Biochem.* **327**, 200-8 (2004).

http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=15051536

M. Dahan *et al.*, **Diffusion dynamics of glycine receptors revealed by single-quantum dot tracking** *Science* **302**, 442-445 (2003).

<http://www.sciencemag.org/cgi/reprint/302/5644/442.pdf>

S. J. Rosenthal *et al.*, **Targeting cell surface receptors with ligand-conjugated nanocrystals** *J. Am. Chem. Soc.* **124**, 4586-4594 (2002).

<http://pubs.acs.org/cgi-bin/article.cgi/jacsat/2002/124/i17/pdf/ja003486s.pdf>

J. A. Kloepper *et al.*, **Quantum dots as strain- and metabolism-specific microbiological labels** *Appl. Envir. Microbiol.* **69**, 4205-4213 (2003).

http://aem.asm.org/cgi/reprint/69/7/4205?maxtoshow=&HITS=10&hits=10&RESULTFORM AT=&searchid=1091566929894_9794&stored_search=&FIRSTINDEX=0&volume=69&first page=4205&journalcode=aem

A. M. Derfus, W. C. W. Chan, S. N. Bhatia, **Probing the cytotoxicity of semiconductor quantum dots** *Nano Lett.* **4**, 11-18 (JAN, 2004).

<http://pubs.acs.org/cgi-bin/sample.cgi/nalefd/2004/4/i01/pdf/nl0347334.pdf>

D. S. Wang, J. B. He, N. Rosenzweig, Z. Rosenzweig, **Superparamagnetic Fe₂O₃ Beads-CdSe/ZnS quantum dots core-shell nanocomposite particles for cell separation** *Nano Lett.* **4**, 409-413 (MAR, 2004).

<http://pubs.acs.org/cgi-bin/article.cgi/nalefd/2004/4/i03/pdf/nl035010n.pdf>

L. Wenhua *et al.*, **Exploring the mechanism of competence development in *Escherichia coli* using quantum dots as fluorescent probes** *J. Biochem. Biophys. Meth.* **58**, 59-66 (2004).

J. M. Tsay, M. Pflughoefft, L. A. Bentolila, S. Weiss, **Hybrid approach to the synthesis of highly luminescent CdTe/ZnS and CdHgTe/ZnS nanocrystals** *J. Am. Chem. Soc.* **126**, 1926-1927 (2004).

<http://pubs.acs.org/cgi-bin/article.cgi/jacsat/2004/126/i07/pdf/ja039227v.pdf>

R. O. Bakalova, H.; Zhelev, Z.; Nagase, T.; Jose, R.; Ishikawa, M.; Baba, Y., **Quantum Dot anti-CD Conjugates: Are They Potential Photosensitizers or Potentiators of Classical Photosensitizing Agents in Photodynamic Therapy of Cancer?** *Nano Lett.* **ASAP** (2004).

<http://pubs.acs.org/cgi-bin/asap.cgi/nalefd/asap/pdf/nl049627w.pdf>

A. Shiohara, A. Hoshino, K. Hanaki, K. Suzuki, K. Yamamoto, **On the cyto-toxicity caused by quantum dots** *Microbiology and Immunology* **48**, 669-675 (2004).

http://www.jstage.jst.go.jp/article/mandi/48/9/669/_pdf

B. C. W. Lagerholm, M.; Ernst, L. A.; Ly, D. H.; Liu, H.; Bruchez, M. P.; Waggoner, A. S., **Multicolor Coding of Cells with Cationic Peptide Coated Quantum Dots** *Nano Lett.* **4**, 2019-2022 (2004).

D. B. Zorov, E. Kobrinsky, M. Juhaszova, S. J. Sollott, **Examining intracellular organelle function using fluorescent probes - >From animalcules to quantum dots** *Circulation Research* **95**, 239-252 (AUG 6, 2004).

<http://circres.ahajournals.org/cgi/reprint/95/3/239>

F. Chen, D. Gerion, **Fluorescent CdSe/ZnS Nanocrystal-Peptide Conjugates for Long-term, Nontoxic Imaging and Nuclear Targeting in Living Cells** *Nano Lett.* **4**, 1827 - 1832 (2004).

<http://pubs.acs.org/cgi-bin/article.cgi/nalefd/2004/4/i10/pdf/nl049170q.pdf>

X. L. Su, Y. B. Li, **Quantum dot biolabeling coupled with immunomagnetic separation for detection of Escherichia coli O157 : H7** *Anal. Chem.* **76**, 4806-4810 (AUG 15, 2004).

<http://pubs.acs.org/cgi-bin/article.cgi/anchem/2004/76/i16/pdf/ac049442+.pdf>

In Vivo Imaging

M. E. Akerman, W. C. W. Chan, P. Laakkonen, S. N. Bhatia, E. Ruoslahti, **Nanocrystal targeting in vivo** *Proceedings of the National Academy of Sciences of the United States of America* **99**, 12617-12621 (OCT 1, 2002).

<http://www.pnas.org/cgi/reprint/99/20/12617.pdf>

B. Dubertret *et al.*, **In vivo imaging of quantum dots encapsulated in phospholipid micelles** *Science* **298**, 1759-1762 (2002).

<http://www.sciencemag.org/cgi/reprint/298/5599/1759.pdf>

D. Larson *et al.*, **Water-soluble quantum dots for multiphoton fluorescence imaging in vivo** *Science* **300**, 1434-1436 (2003).

<http://www.sciencemag.org/cgi/reprint/300/5624/1434.pdf>

S. Kim *et al.*, **Near-infrared fluorescent type II quantum dots for sentinel lymph node mapping** *Nature Biotechnol.* **22**, 93-97 (2004).

<http://www.nature.com/cgi-taf/DynaPage.taf?file=/nbt/journal/v22/n1/full/nbt920.html&filetype=PDF>

M. J. Levene, D. A. Dombek, K. A. Kasischke, R. P. Molloy, W. W. Webb, **In vivo multiphoton microscopy of deep brain tissue** *Journal of Neurophysiology* **91**, 1908-1912 (APR, 2004).

http://jn.physiology.org/cgi/reprint/91/4/1908?maxtoshow=&HITS=10&hits=10&RESULTFORMAT=&author1=Webb%2C+W&searchid=1091914211718_733&stored_search=&FIRSTINDEX=0&sortspec=relevance

A. Hoshino, K. Hanaki, K. Suzuki, K. Yamamoto, **Applications of T-lymphoma labeled with fluorescent quantum dots to cell tracing markers in mouse body** *Biochem. Biophys. Res. Commun.* **314**, 46-53 (2004).

http://www.sciencedirect.com/science?_ob=MIImg&_imagekey=B6WBK-4B8B910-5-N&_cdi=6713&_orig=search&_coverDate=01%2F30%2F2004&_qd=1&_sk=996859998&view=c&_wchp=dGLbVzz-zSkWW&_acct=C000000152&_version=1&_userid=4423&md5=c7e549290db677c238dcdca5e10677e0&ie=f.pdf

X. Gao, Y. Cui, R. M. Levenson, L. W. K. Chung, S. Nie, **In vivo cancer targeting and imaging with semiconductor quantum dots** *Nature Biotechnol.* (2004).

<http://www.nature.com/cgi-taf/DynaPage.taf?file=/nbt/journal/v22/n8/full/nbt994.html&filetype=PDF>

N. N. Mamedova, N. A. Kotov, A. L. Rogach, J. Studer, **Albumin-CdTe nanoparticle bioconjugates: preparation, structure and interunit energy transfer with antenna effect** *Nano Lett.* **1**, 282-286 (2001).

<http://pubs.acs.org/cgi-bin/article.cgi/nalefd/2001/1/i06/pdf/nl015519n.pdf>

H. Mattoussi *et al.*, **Bioconjugation of highly luminescent colloidal CdSe-ZnS quantum dots with an engineered two-domain recombinant protein** *Physica Status Solidi B-Basic Research* **224**, 277-283 (MAR, 2001).

<http://www3.interscience.wiley.com/cgi-bin/fulltext/89014159/PDFSTART>

B. Ballou, B. C. Lagerholm, L. A. Ernst, M. P. Bruchez, A. S. Waggoner, **Noninvasive imaging of quantum dots in mice** *Bioconjug. Chem.* **15**, 79-86 (2004).

<http://pubs.acs.org/cgi-bin/sample.cgi/bcches/2004/15/i01/pdf/bc034153y.pdf>

E. B. Voura, J. K. Jaiswal, H. Mattoussi, S. M. Simon, **Tracking metastatic tumor cell extravasation with quantum dot nanocrystals and fluorescence emission-scanning microscopy** *Nat Med* **10**, 993-8 (Sep, 2004).

<http://www.nature.com/cgi-taf/DynaPage.taf?file=/nm/journal/v10/n9/full/nm1096.html&filetype=pdf>

M. J. Levene, D. A. Dombek, K. A. Kasischke, R. P. Molloy, W. W. Webb, **In vivo multiphoton microscopy of deep brain tissue** *Journal of Neurophysiology* **91**, 1908-1912 (APR, 2004).

http://jn.physiology.org/cgi/reprint/91/4/1908?maxtoshow=&HITS=10&hits=10&RESULTFORM AT=&author1=Webb%2C+W&searchid=1091914211718_733&stored_search=&FIRSTINDEX=0&sortspec=relevance

L. M. Chen *et al.*, **Design and validation of a bifunctional ligand display system for receptor targeting** *Chemistry & Biology* **11**, 1081-1091 (AUG, 2004).

http://www.sciencedirect.com/science?_ob=MIImg&_imagekey=B6VRP-4D4JYMC-C-F&_cdi=6240&_orig=search&_coverDate=08%2F31%2F2004&_qd=1&_sk=999889991&_view=c&_wchp=dGLbVzz-zSkWz&_acct=C000000152&_version=1&_userid=4423&_md5=7603d033dac5d0cb3661c65ad5589ecf&_ie=f.pdf

Synthesis

L. Spanhel, M. Haase, H. Weller, A. Henglein, **Photochemistry of Colloidal Semiconductors .20. Surface Modification and Stability of Strong Luminescing Cds Particles** *J. Am. Chem. Soc.* **109**, 5649-5655 (SEP 16, 1987).

<http://pubs.acs.org/cgi-bin/archive.cgi/jacsat/1987/109/i19/pdf/ja00253a015.pdf>

A. Eychmuller, A. Mews, H. Weller, **A Quantum-Dot Quantum-Well - Cds/Hgs/Cds** *Chemical Physics Letters* **208**, 59-62 (JUN 4, 1993).

http://www.sciencedirect.com/science?_ob=MIImg&_imagekey=B6TFN-44WCWM6-FW-1&_cdi=5231&_orig=browse&_coverDate=06%2F04%2F1993&_sk=997919998&_view=c&_wchp=dGLbVzz-zSkzk&_acct=C000000152&_version=1&_userid=4423&_md5=34240300517e759ce8a7788af2b3d87e&_ie=f.pdf

C. B. Murray, D. J. Norris, M. G. Bawendi, **Synthesis and Characterization of Nearly Monodisperse Cde (E = S, Se, Te) Semiconductor Nanocrystallites** *J. Am. Chem. Soc.* **115**, 8706-8715 (SEP 22, 1993).

<http://pubs.acs.org/cgi-bin/archive.cgi/jacsat/1993/115/i19/pdf/ja00072a025.pdf>

M. A. Hines, P. Guyot-Sionnest, **Synthesis and characterization of strongly luminescing ZnS-capped CdSe nanocrystals** *Journal of Physical Chemistry* **100**, 468-471 (1996).

<http://pubs.acs.org/cgi-bin/archive.cgi/jpchax/1996/100/i02/pdf/jp9530562.pdf>

R. O. Dabbousi *et al.*, **(CdSe)ZnS core-shell quantum dots: synthesis and characterization of a size series of highly luminescent nanocrystallites** *J. Phys. Chem. B* **101**, 9463-9475 (1997).

<http://pubs.acs.org/cgi-bin/archive.cgi/jpcbfc/1997/101/i46/pdf/jp971091y.pdf>

X. Peng, M. C. Schlamp, A. V. Kadavanich, A. P. Alivisatos, **Epitaxial growth of highly luminescent CdSe/CdS core/shell nanocrystals with photostability and electronic accessibility** *J. Am. Chem. Soc.* **119**, 7019-7029 (1997).

<http://pubs.acs.org/cgi-bin/archive.cgi/jacsat/1997/119/i30/pdf/ja970754m.pdf>

Z. A. Peng, X. G. Peng, **Formation of high-quality CdTe, CdSe, and CdS nanocrystals using CdO as precursor** *J. Am. Chem. Soc.* **123**, 183-184 (JAN 10, 2001).

<http://pubs.acs.org/cgi-bin/article.cgi/jacsat/2001/123/i01/pdf/ja003633m.pdf>

N. Gaponik *et al.*, **Thiol-capping of CdTe nanocrystals: An alternative to organometallic synthetic routes** *J. Phys. Chem. B* **106**, 7177-7185 (JUL 25, 2002).

<http://pubs.acs.org/cgi-bin/article.cgi/jpcbfc/2002/106/i29/pdf/jp025541k.pdf>

X. Peng, J. Wickham, A. P. Alivisatos, **Kinetics of II-VI and III-V Colloidal Semiconductor Nanocrystal Growth: "Focusing" of Size Distributions** *J. Am. Chem. Soc.* **120** (1998).

<http://pubs.acs.org/cgi-bin/archive.cgi/jacsat/1998/120/i21/pdf/ja9805425.pdf>

L. Manna, E. C. Scher, A. P. Alivisatos, **Synthesis of Soluble and Processable Rod-, Arrow-, Teardrop-, and Tetrapod-Shaped CdSe Nanocrystals** *J. Am. Chem. Soc.* **122**, 12700-12706 (2000).

<http://pubs.acs.org/cgi-bin/article.cgi/jacsat/2000/122/i51/pdf/ja003055+.pdf>

Z. A. Peng, X. G. Peng, **Nearly monodisperse and shape-controlled CdSe nanocrystals via alternative routes: Nucleation and growth** *J. Am. Chem. Soc.* **124**, 3343-3353 (APR 3, 2002).

<http://pubs.acs.org/cgi-bin/article.cgi/jacsat/2002/124/i13/pdf/ja0173167.pdf>

J. J. Li *et al.*, **Large-scale synthesis of nearly monodisperse CdSe/CdS core/shell nanocrystals using air-stable reagents via successive ion layer adsorption and reaction** *J. Am. Chem. Soc.* **125**, 12567-12575 (OCT 15, 2003).

<http://pubs.acs.org/cgi-bin/article.cgi/jacsat/2003/125/i41/pdf/ja0363563.pdf>

Near-IR NCs

Y. W. Cao, U. Banin, **Growth and properties of semiconductor core/shell nanocrystals with InAs cores** *J. Am. Chem. Soc.* **122**, 9692-9702 (2000).

<http://pubs.acs.org/cgi-bin/article.cgi/jacsat/2000/122/i40/pdf/ja001386g.pdf>

A. L. Rogach *et al.*, **Colloidally prepared CdHgTe and HgTe quantum dots with strong near-infrared luminescence** *Phys. Status Solidi B* **224**, 153-158 (2001).

<http://www3.interscience.wiley.com/cgi-bin/fulltext/77502123/PDFSTART>

R. E. Bailey, S. M. Nie, **Alloyed semiconductor quantum dots: Tuning the optical properties without changing the particle size** *J. Am. Chem. Soc.* **125**, 7100-7106 (2003).

<http://pubs.acs.org/cgi-bin/article.cgi/jacsat/2003/125/i23/pdf/ja035000o.pdf>

S. Kim, B. Fisher, H.-J. Eisler, M. Bawendi, **Type-II Quantum Dots: CdTe/CdSe(Core/Shell) and CdSe/ZnTe(Core/Shell) Heterostructures** *J. Am. Chem. Soc.* **125**, 11466-11467 (2003).

<http://pubs.acs.org/cgi-bin/article.cgi/jacsat/2003/125/i38/pdf/ja0361749.pdf>

J. M. Tsay, M. Pflughoeft, L. A. Bentolila, S. Weiss, **Hybrid approach to the synthesis of highly luminescent CdTe/ZnS and CdHgTe/ZnS nanocrystals** *J. Am. Chem. Soc.* **126**, 1926-1927 (2004).

<http://pubs.acs.org/cgi-bin/article.cgi/jacsat/2004/126/i07/pdf/ja039227v.pdf>

W. W. Yu, J. C. Falkner, B. S. Shih, V. L. Colvin, **Preparation and Characterization of Monodisperse**

PbSe Semiconductor Nanocrystals in a Noncoordinating Solvent *Chem. Mater.* in press (2004).

<http://pubs.acs.org/cgi-bin/asap.cgi/cmatex/asap/pdf/cm049476y.pdf>

Photophysics

B. C. Hess *et al.*, **Surface transformation and photoinduced recovery in CdSe nanocrystals** *Physical Review Letters* **86**, 3132-3135 (2001).

<http://scitation.aip.org/getpdf/servlet/GetPDFServlet?filetype=pdf&id=PRLTAO000086000014003132000001&idtype=cvips>

M. Kuno, D. P. Fromm, H. F. Hamann, A. Gallagher, D. J. Nesbitt, **On/off fluorescence intermittency of single semiconductor quantum dots** *Journal of Chemical Physics* **115**, 1028-1040 (2001).

<http://scitation.aip.org/getpdf/servlet/GetPDFServlet?filetype=pdf&id=JCPSA6000115000002001028000001>

C. A. Leatherdale, M. G. Bawendi, **Observation of solvatochromism in CdSe quantum dots** *Physical Review B* **63**, 165315 (2001).

<http://scitation.aip.org/getpdf/servlet/GetPDFServlet?filetype=pdf&id=PRBMDO000063000016165315000001&idtype=cvips>

M. Nirmal, C. B. Murray, M. G. Bawendi, **Fluorescence-line narrowing in CdSe quantum dots: Surface localization of the photogenerated exciton** *Physical Review B* **50**, 2293-2300 (1994).

http://prola.aps.org/pdf/PRB/v50/i4/p2293_1

M. Nirmal, D. J. Norris, M. G. Bawendi, A. L. Efros, M. Rosen, **Observation of the "Dark Exciton" in CdSe Quantum Dots** *Physical Review Letters* **75**, 3728-3731 (1995).

http://prola.aps.org/pdf/PRL/v75/i20/p3728_1

S. A. Blanton, M. A. Hines, P. Guyot-Sionnest, **Photoluminescence wandering in single CdSe nanocrystals** *Applied Physics Letters* **69**, 3905-3907 (1996).

<http://scitation.aip.org/getpdf/servlet/GetPDFServlet?filetype=pdf&id=APPLAB000069000025003905000001>

M. Chamarro, C. Gourdon, P. Lavallard, **Photoluminescence polarization of semiconductor nanocrystals** *Journal of Luminescence* **70**, 222-237 (1996).

http://www.sciencedirect.com/science?_ob=MIImg&_imagekey=B6TJH-3VT9GTJ-M-2&_cdi=5311&_orig=search&_coverDate=10%2F31%2F1996&_qd=1&_sk=999299998&view=c&_wchp=dGLbVlz-zSkWb&_acct=C000000152&_version=1&_userid=4423&md5=d01de6c293cae8d9e3254419e3dd3308&ie=f.pdf

M. Nirmal *et al.*, **Fluorescence intermittency in single cadmium selenide nanocrystals** *Nature* **383**, 802-804 (1996).

<http://www.nature.com/cgi-taf/DynaPage.taf?file=/nature/journal/v383/n6603/full/383802a0.html&filetype=PDF>

D. J. Norris, A. L. Efros, M. Rosen, M. G. Bawendi, **Size dependence of exciton fine structure in CdSe quantum dots** *Physical Review B* **53**, 16347-16354 (1996).

http://prola.aps.org/pdf/PRB/v53/i24/p16347_1

D. J. Norris, M. G. Bawendi, **Measurement and assignment of the size-dependent optical spectrum in CdSe quantum dots** *Physical Review B* **53**, 16338-16346 (1996).

http://prola.aps.org/pdf/PRB/v53/i24/p16338_1

- R. O. Dabbousi *et al.*, **(CdSe)ZnS core-shell quantum dots: synthesis and characterization of a size series of highly luminescent nanocrystallites** *J. Phys. Chem. B* **101**, 9463-9475 (1997).
<http://pubs.acs.org/cgi-bin/archive.cgi/jpcb/k/1997/101/i46/pdf/jp971091y.pdf>
- A. L. Efros, M. Rosen, **Random Telegraph Signal in the Photoluminescence Intensity of a Single Quantum Dot** *Physical Review Letters* **78**, 1110-1113 (1997).
http://prola.aps.org/pdf/PRL/v78/i6/p1110_1
- S. A. Empedocles, M. G. Bawendi, **Quantum-Confined Stark Effect in Single CdSe Nanocrystallite Quantum Dots** *Science* **278**, 2114-2117 (1997).
<http://www.sciencemag.org/cgi/reprint/278/5346/2114.pdf>
- V. I. Klimov, D. W. McBranch, **Auger-process-induced charge separation in semiconductor nanocrystals** *Physical Review B* **55**, 13173-13179 (1997).
http://prola.aps.org/pdf/PRB/v55/i19/p13173_1
- M. Kuno, J. K. Lee, B. O. Dabbousi, F. V. Mikulec, M. G. Bawendi, **The band edge luminescence of surface modified CdSe nanocrystallites: Probing the luminescing state** *Journal of Chemical Physics* **106**, 9869-9882 (1997).
<http://scitation.aip.org/getpdf/servlet/GetPDFServlet?filetype=pdf&id=JCPSA6000106000023009869000001>
- S. Empedocles, M. Bawendi, **Spectroscopy of Single CdSe Nanocrystallites** *Accounts in Chemical Research* **32**, 389-396 (1999).
<http://pubs.acs.org/cgi-bin/archive.cgi/achre4/1999/32/i05/pdf/ar9501939.pdf>
- S. A. Empedocles, M. G. Bawendi, **Influence of Spectral Diffusion on the Line Shapes of Single CdSe Nanocrystallite Quantum Dots** *Journal of Physical Chemistry* **103**, 1826-1830 (1999).
<http://pubs.acs.org/cgi-bin/archive.cgi/jpcb/k/1999/103/i11/pdf/jp983305x.pdf>
- M. Nirmal, L. Brus, **Luminescence Photophysics in Semiconductor Nanocrystals** *Accounts of Chemical Research* **32**, 407-414 (1999).
<http://pubs.acs.org/cgi-bin/archive.cgi/achre4/1999/32/i05/pdf/ar9700320.pdf>
- E. Rabani, B. Hetényi, B. J. Berne, L. E. Brus, **Electronic properties of CdSe nanocrystals in the absence and presence of a dielectric medium** *Journal of Chemical Physics* **110**, 5355-5369 (1999).
<http://scitation.aip.org/getpdf/servlet/GetPDFServlet?filetype=pdf&id=JCPSA6000110000011005355000001>
- S. R. Cordero, P. J. Carson, R. A. Estabrook, G. F. Strouse, S. K. Buratto, **Photo-Activated Luminescence of CdSe Quantum Dot Monolayers** *J. Phys. Chem. B* **104**, 12137-12142 (2000).
<http://pubs.acs.org/cgi-bin/article.cgi/jpcb/k/2000/104/i51/pdf/jp001771s.pdf>
- V. I. Klimov *et al.*, **Optical Gain and Stimulated Emission in Nanocrystal Quantum Dots** *Science* **290**, 314-317 (2000).
<http://www.sciencemag.org/cgi/reprint/290/5490/314.pdf>
- V. I. Klimov, A. A. Mikhailovsky, D. W. McBranch, C. A. Leatherdale, M. G. Bawendi, **Quantization of Multiparticle Auger Rates in Semiconductor Quantum Dots** *Science* **287**, 1011-1013 (2000).
<http://www.sciencemag.org/cgi/reprint/287/5455/1011.pdf>
- M. Kuno, D. P. Fromm, H. F. Hamann, A. Gallagher, D. J. Nesbitt, **Nonexponential "blinking" kinetics of single CdSe quantum dots: A universal power law behavior** *Journal of Chemical Physics* **112**, 3117-3120 (2000).
<http://link.aip.org/link/?JCP/112/3117>
- B. Lounis, H. A. Bechtel, D. Gerion, A. P. Alivisatos, W. E. Moerner, **Photon antibunching in single**

CdSe/ZnS quantum dot fluorescence *Chemical Physics* **329**, 399-404 (2000).

http://www.sciencedirect.com/science?_ob=MIImg&_imagekey=B6TFN-41XMB7K-D-2R&_cdi=5231&_orig=search&_coverDate=10%2F27%2F2000&_qd=1&_sk=996709994&view=c&_wchp=dGLbVtz-zSkWW&_acct=C000000152&_version=1&_userid=4423&md5=f2aad841370122c10c576ee71d7245f3&ie=f.pdf

J. Seufert *et al.*, **Spectral diffusion of the exciton transition in a single self-organized quantum dot** *Applied Physics Letters* **76**, 1872-1874 (2000).

<http://scitation.aip.org/getpdf/servlet/GetPDFServlet?filetype=pdf&id=APPLAB000076000014001872000001&jsessionId=823371092093947137>

M. Dahan *et al.*, **Time-gated biological imaging by use of colloidal quantum dots** *Optics Lett.* **26**, 825-827 (2001).

<http://www.opticsinfobase.org/ViewMedia.cfm?id=64384&seq=0>

B. R. Fisher, H. J. Eisler, N. E. Stott, M. G. Bawendi, **Emission intensity dependence and single-exponential behavior in single colloidal quantum dot fluorescence lifetimes** *J. Phys. Chem. B* **108**, 143-148 (JAN 8, 2004).

<http://pubs.acs.org/cgi-bin/sample.cgi/jpcb/k/2004/108/i01/pdf/jp035756+.pdf>

Y. Ebenstein, T. Mokari, U. Banin, **Fluorescence quantum yield of CdSe/ZnS nanocrystals investigated by correlated atomic-force and single-particle fluorescence microscopy** *Applied Physics Letters* **80**, 4033-4035 (MAY 27, 2002).

<http://scitation.aip.org/getpdf/servlet/GetPDFServlet?filetype=pdf&id=APPLAB000080000021004033000001&idtype=cvips>

K. T. Shimizu *et al.*, **Blinking statistics in single semiconductor nanocrystal quantum dots** *Physical Review B* **63**, 205316 (2001).

<http://scitation.aip.org/getpdf/servlet/GetPDFServlet?filetype=pdf&id=PRBMDO000063000020205316000001&idtype=cvips>

S. Hohng, T. Ha, **Near-complete suppression of quantum dot blinking in ambient conditions** *J. Am. Chem. Soc.* **126**, 1324-1325 (FEB 11, 2004).

<http://pubs.acs.org/cgi-bin/article.cgi/jacsat/2004/126/i05/pdf/ja039686w.pdf>

Review Articles

A. P. Alivisatos, **The use of nanocrystals in biological detection** *Nature Biotechnol.* **22**, 47-52 (2004).

http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=14704706

W. C. W. Chan *et al.*, **Luminescent quantum dots for multiplexed biological detection and imaging** *Current Opinion in Biotechnology* **13**, 40-46 (FEB, 2002).

http://www.sciencedirect.com/science?_ob=MIImg&_imagekey=B6VRV-453H7H9-8-C&_cdi=6244&_orig=search&_coverDate=02%2F01%2F2002&_qd=1&_sk=999869998&view=c&_wchp=dGLbVzb-zSkzS&_acct=C000000152&_version=1&_userid=4423&md5=81083ef13dfacce8a46068062696fa0d&ie=f.pdf

X. Gao, W. C. W. Chan, S. Nie, **Quantum-dot nanocrystals for ultrasensitive biological labeling and**

- multicolor optical encoding** *J. Biomed. Opt.* **7**, 532-537 (2002).
<http://scitation.aip.org/getpdf/servlet/GetPDFServlet?filetype=pdf&id=JBOPFO000007000004000532000001>
- X. Michalet *et al.*, **Properties of Fluorescent Semiconductor Nanocrystals and their Application to Biological Labeling** *Single Mol.* **2**, 261-276 (2001).
<http://www3.interscience.wiley.com/cgi-bin/fulltext/88511852/PDFSTART>
- C. Seydel, **quantum dots get wet** *Science* **300**, 80-81 (2003).
<http://www.sciencemag.org/cgi/reprint/300/5616/80.pdf>
- J. K. S. Jaiswal, S. M., **Potentials and pitfalls of fluorescent quantum dots for biological imaging.** *Trends Cell Biol.* **14**, 497-504 (2004).
http://www.sciencedirect.com/science?_ob=MIimg&_imagekey=B6TCX-4D16V3G-5-5&_cdi=5182&_orig=search&_coverDate=09%2F01%2F2004&_qd=1&_sk=999859990&_view=c&_wchp=dGLbVlb-zSkWb&_acct=C000000152&_version=1&_userid=4423&_md5=2258031939198b6c21c7044a0ee98906&_ie=f.pdf
- A. M. Smith, S. M. Nie, **Chemical analysis and cellular imaging with quantum dots** *Analyst* **129**, 672-677 (2004).
<http://pubs.rsc.org/ej/AN/2004/b404498n.pdf?&Yr=2004&VOLNO=%26nbsp%3B%3Cb%3E129%3C%2Fb%3E&Fp=672&Ep=677&JournalCode=AN&Iss=8>
- A. M. Smith, X. Gao, S. Nie, **Quantum-Dot Nanocrystals for In-vivo Molecular and Cellular Imaging** *Photochem Photobiol* (Jun 1, 2004).
<http://phot.allenpress.com/pdfserv/10.1562%2F2004-06-21-IR-209>
- J. Riegler, T. Nann, **Application of luminescent nanocrystals as labels for biological molecules** *Anal Bioanal Chem* **379**, 913-9 (Aug, 2004).
<http://www.springerlink.com/app/home/content.asp?wasp=4nc6a0bqvq4xum9ftdx&referrer=contribution&format=4&page=1&pagecount=7>
- M. Green, **Semiconductor Quantum Dots as Biological Imaging Agents** *Angewandte Chemie International Edition* **43**, 4129 - 4131 (2004).
<http://www3.interscience.wiley.com/cgi-bin/fulltext/109567126/PDFSTART>
- R. C. Doty, D. G. Fernig, R. Levy, **Nanoscale science: a big step towards the Holy Grail of single molecule biochemistry and molecular biology** *Cellular and Molecular Life Sciences* **61**, 1843-1849 (JUL, 2004).
<http://springerlink.metapress.com/media/LP3EF11QXQ1XRNBGTAV0/Contributions/F/H/K/6/FHK69UQ89LD6JV4B.pdf>
<http://www.springerlink.com/app/home/content.asp?wasp=4nc6a0bqvq4xum9ftdx&referrer=contribution&format=4&page=1&pagecount=7>
- M. Green, **Semiconductor Quantum Dots as Biological Imaging Agents** *Angewandte Chemie International Edition* **43**, 4129 - 4131 (2004).
<http://www3.interscience.wiley.com/cgi-bin/fulltext/109567126/PDFSTART>