

Bibliography of DPN[®] Publications

Hundreds of research papers have been published on Dip Pen Nanolithography[®] (DPN) technology. The following papers cover a variety of DPN applications from the various inks to massively, parallel patterning.

This list is organized by the following DPN applications:

1. **Nanoelectronics**
 - 1.1. CNTs
 - 1.2. Biosensors
 - 1.3. Other
2. **Nanomaterials Discovery**
 - 2.1. Sol Gels
 - 2.2. Crystal Growth
 - 2.3. Nanoparticles
 - 2.4. Nanorods & Nanowires
 - 2.5. Templating
3. **Biomolecules**
 - 3.1. DNA
 - 3.2. Proteins
 - 3.3. Viruses
 - 3.4. Other
4. **Metal Inks**
5. **Etch Resist & Whittling**
6. **Exotics**
7. **Fundamental**
8. **Polymers**
9. **Probe Technology & Ink Delivery**
10. **Reviews**

1. Nanoelectronics

1.1. CNTs

- 1.1.1. Rao, SG; Huang, L; Setyawan, W; Hong, S: Large-scale assembly of carbon nanotubes *Nature* 2003 425 (6953): 36-37.
- 1.1.2. Wang, Y; Maspoch, D; Zou, S; Schatz, GC; Smalley, RE; Mirkin, CA: Controlling the shape, orientation, and linkage of carbon nanotube features with nano affinity templates *Proceedings of the National Academy of Sciences* 2006 103 (7): 2026-2031.
- 1.1.3. Freedman, J.R.M., D; Korneva, G; Gogotsi, Y; G. Friedman & A K Fontecchio, Magnetically assembled carbon nanotube tipped pipettes. *Applied Physics Letters*, 2007. 90(10).

1.2. Biosensors

- 1.2.1. Pena, DJ; Raphael, MP; Byers, JM: "Dip-Pen" Nanolithography in Registry with Photolithography for Biosensor Development *Langmuir* 2003, 19 (21): 9028-9032.
- 1.2.2. Zhang, H; Lee, KB; Li, Mirkin, CA: Biofunctionalized Nanoarrays of Inorganic Structures Prepared by Dip-Pen Nanolithography *Nanotechnology* 2003, 14 (10): 1113-1117.

1.3. Other

- 1.3.1. Chiu, JJ; Kei, CC; Perng, TP; et al: Organic Semiconductor Nanowires for Field Emission *Advanced Materials* 2003, 15 (16): 1361-1364.
- 1.3.2. Maruccio, G; Cingolani, R; Rinaldi, R: Projecting the nanoworld: Concepts, results and perspectives of molecular electronics *J. Mater. Chem.* 2004, 14 (4): 542-554.
- 1.3.3. Wouters, D; Schubert, US: Nanolithography and nanochemistry: Probe-related patterning techniques and chemical modification for nanometer-sized devices *Angew. Chemie. Int. Ed.* 2004, 43 (19): 2480-2495.
- 1.3.4. Vijaykumar, T; John, NS; Kulkarni, GU: A resistless photolithography method for robust markers and electrodes *Solid State Sciences* 2005 7 (12): 1475-1478.
- 1.3.5. Ding, L; Li, Y; Chu, HB; Li, XM; Liu, J: Creation of cadmium sulfide nanostructures using AFM dip-pen nanolithography *Journal of Physical Chemistry B* 2005 109 (47): 22337-22340.

2. Nanomaterials Discovery

2.1. Sol Gels

- 2.1.1. Su, M; Liu, X; Li, SY; Dravid, VP; Mirkin, CA: Moving Beyond Molecules: Patterning Solid-State Features Via Dip-Pen Nanolithography with Sol-Based Inks *J. Am. Chem. Soc.* 2002, 124 (8): 1560-1561.
- 2.1.2. Fu, L; Liu, X; Zhang, Y; Dravid, V; Mirkin, CA: Nanopatterning of "Hard" Magnetic Nanostructures via Dip-Pen Nanolithography and a Sol-Based Ink *Nano Letters* 2003, 3 (6): 757-760.
- 2.1.3. Su, M; Li, S; Dravid, VP: Miniaturized Chemical Multiplexed Sensor Array *JACS* 2003, 125, 9930-9931.
- 2.1.4. Gundiah, G; John, NS; Thomas, PJ; Kulkarni, GU; Rao, CNR: Dip-pen nanolithography with magnetic Fe₂O₃ nanocrystals *Appl. Phys. Lett.* 2004, 84 (26): 5341-5343.
- 2.1.5. Saya D, T.L., JB Pourciel, C Bergaud, L Nieu, Collective fabrication of an in-plane silicon nanotip for parallel femtoliter droplet deposition. *Journal of Micromechanics and Microengineering*, 2007. 17(1): p. N-1-N-5.
- 2.1.6. Nie, H.M., NS; Lau, WM, Nanolithography of a full-coverage octadecylphosphonic acid monolayer spin coated on a Si substrate. *Applied Physics Letters*, 2007. 90(20).

2.2. Crystal Growth

- 2.2.1. Roldughin, VI: Self-assembly of nanoparticles at interfaces *Russian Chemical Reviews* 2004, 73 (2): 115-145.

- 2.2.2. Thomas, JP; Kulkarni, GU; Rao, CNR: Dip-pen lithography using aqueous metal nanocrystal dispersions *J. Mater. Chem.* 2004, 14, 625-628.
- 2.2.3. Liu, X; Zhang, Y; Goswami, DK; Okasinski, JS; Salaita, K; Sun, P; Bedzyk, MJ; Mirkin, CA: The controlled evolution of a polymer single crystal *Science* 2005, 307 (5716): 1763-1766.
- 2.2.4. Schenning, APHJ; Meijer, EW: Supramolecular electronics; nanowires from self-assembled pi-conjugated systems *Chem. Comm.* 2005 (26): 3245-3258.

2.3. Nanoparticles

- 2.3.1. Demers, LM; Park, SJ; Taton, TA; Li, Z; Mirkin, CA: Orthogonal Assembly of Nanoparticle Building Blocks on Dip-Pen Nanolithographically Generated Templates of DNA *Angew. Chem. Int. Ed.* 2001, 40 (16): 3071-3073.
- 2.3.2. Demers, LM; Mirkin, CA: Combinatorial Templates Generated by Dip-Pen Nanolithography for the Formation of Two-Dimensional Particle Arrays *Angew. Chem. Int. Ed.* 2001, 40 (16): 3069-3071.
- 2.3.3. Mirkin, CA; Hong, S; Demers, LM: Dip-Pen Nanolithography: A New Tool for Studying Template Driven Particle Assembly and Crystallization *Polym. Mater. Sci. Eng.* 2001, 84, 18.
- 2.3.4. Liao, JH; Huang, L; Gu, N: Fabrication of Nanoparticle Pattern Through Atomic Force Microscopy Tip-Induced Deposition on Modified Silicon Surfaces *Chin. Phys. Lett.* 2002, 19 (1): 134-136.
- 2.3.5. Ben Ali, M; Ondarcuhu, T; Brust, M; Joachim, C: Atomic Force Microscope Tip Nanoprinting of Gold Nanoclusters *Langmuir* 2002, 18, 872-876.
- 2.3.6. Garno, JC; Yang, YY; Amro, NA; Cruchon-Dupeyrat, S; Chen, S; Lui, GY: Precise Positioning of Nanoparticles on Surfaces Using Scanning Probe Lithography *Nano Letters* 2003, 3 (3): 389-395.
- 2.3.7. Prime, D; Paul, S; Pearson, C; Green, M; Petty, MC: Nanoscale patterning of gold nanoparticles using an atomic force microscope *Materials Science & Engineering C* 2005, 25 (1): 33-38.
- 2.3.8. Nyamjav, D; Ivanisevic, A: Templates for DNA-templated Fe₃O₄ nanoparticles *Biomaterials* 2005, 26 (15): 2749-2757.
- 2.3.9. Vijaykumar, T; John, NS; Kulkarni, GU: A resistless photolithography method for robust markers and electrodes *Solid State Sciences* 2005 7 (12): 1475-1478.

2.4. Nanorods & Nanowires

- 2.4.1. Liu, X; Fu, L; Hong, S; Dravid, VP; Mirkin, CA: Arrays of Magnetic Nanoparticles Patterned Via "Dip-Pen" Nanolithography *Advanced Materials* 2002, 14 (3): 231-234.
- 2.4.2. Ivanisevic, A; Im, JH; Lee, KB; Park, SJ; Demers, LM; Watson, KJ; Mirkin, CA: Redox-Controlled Orthogonal Assembly of Charged Nanostructures *J. Am. Chem. Soc.* 2001, 123, 12424-12425.
- 2.4.3. Maynor, BW; Li, JY; Lu, CG; Liu, J: Site-specific fabrication of nanoscale heterostructures: Local chemical modification of GaN nanowires using electrochemical dip-pen nanolithography *JACS* 2004, 126 (20): 6409-6413.
- 2.4.4. Li, JY; Lu, CG; Maynor, B; Huang, SM; Liu, J: Controlled growth of long GaN nanowires from catalyst patterns fabricated by "Dip-Pen" nanolithographic techniques *Chem. Mat.* 2004, 16 (9): 1633-1636. Kooi, SE; Baker, LA; Sheehan, PE, Whitman, LJ: Dip-pen nanolithography of chemical templates on silicon oxide *Adv. Mater.* 2004, 16 (12): 1013-1016.
- 2.4.5. Qin, L; Park, S; Huang, L; Mirkin, CA: On-wire lithography *Science* 2005 309: 113-115.
- 2.4.6. Jiang, H; Stupp, SI: Dip-pen patterning and surface assembly of peptide amphiphiles *Langmuir* 2005 21: 5242-5246.
- 2.4.7. H. Taha, A. Lewis and C. Sukenik, Controlled deposition of gold nanowires on semiconducting and nonconducting surfaces *Nano Letters*, 7(7), 1883-1887 (2007).

2.5. Templating

- 2.5.1. Porter, LA; Choi, HC; Schmeltzer, JM; Ribbe, AE; Elliott, LCC; Buriak, JM: Electroless Nanoparticle Film Deposition Compatible with Photolithography, Microcontact Printing, and Dip-Pen Nanolithography Patterning Technologies *Nano Letters* 2002, 2 (12): 1369-1372.
- 2.5.2. Mirkin, CA: Programming the Assembly of Two- and Three-Dimensional Architectures with DNA and Nanoscale Inorganic Building Blocks *Inorg. Chem.* 2000, 39 (11): 2258-2272.
- 2.5.3. Auletta, T; Dordi, B; Mulder, A; Sartori, A; Onclin, S; Bruinink, CM; et al: Writing patterns of molecules on molecular printboards *Angew. Chemie. Int. Ed.* 2004, 43 (3): 369-373.
- 2.5.4. Kooi, SE; Baker, LA; Sheehan, PE, Whitman, LJ: Dip-pen nanolithography of chemical templates on silicon oxide *Adv. Mater.* 2004, 16 (12): 1013-1016.
- 2.5.5. Zhang, H; Jin, RC; Mirkin, CA: Synthesis of open-ended, cylindrical Au-Ag alloy nanostructures on a Si/SiO_x surface *Nano Letters* 2004, 4 (8): 1493-1495.
- 2.5.6. Nyamjav, D; Ivanisevic, A: Properties of polyelectrolyte templates generated by dip-pen nanolithography and microcontact printing *Chem. Mater.* 2004, 16: 5216-5219.
- 2.5.7. Noh, DY; Willing, GA; Han, CY; Shin, KS; Geiser, U; Wang, HH: BEDT-TTF template crystallization with use of an electron donor molecule with dodecanethiol *Chemistry of Materials* 2004, 16 (23): 4777-4782.
- 2.5.8. Yu, M; Nyamjav, D; Ivanisevic, A: Fabrication of positively and negatively charged polyelectrolyte structures by dip-pen nanolithography *J. of Mater. Chem.* 2005, 15 (6): 649-652.
- 2.5.9. Nyamjav, D; Ivanisevic, A: Templates for DNA-templated Fe₃O₄ nanoparticles *Biomaterials* 2005, 26 (15): 2749-2757.
- 2.5.10. Wang, Y; MasPOCH, D; Zou, S; Schatz, GC; Smalley, RE; Mirkin, CA: Controlling the shape, orientation, and linkage of carbon nanotube features with nano affinity templates *Proceedings of the National Academy of Sciences* 2006 103 (7): 2026-2031.
- 2.5.11. J. C. Garno, C. D. Zangmeister and J. D. Batteas, Directed electroless growth of metal nanostructures on patterned self-assembled monolayers. *Langmuir*, 23(14), 7874-7879 (2007).

3. Biomolecules

3.1. DNA

- 3.1.1. Zhang, H; Li, Z; Mirkin, CA: Dip-Pen Nanolithography-Based Methodology for Preparing Arrays of Nanostructures Functionalized with Oligonucleotides *Advanced Materials* 2002, 14 (20): 1472-1474.
- 3.1.2. Demers, LM; Ginger, DS; Park, SJ; Li, Z; Chung, SW; Mirkin, CA: Direct Patterning of Modified Oligonucleotides on Metals and Insulators by Dip-Pen Nanolithography *Science* 2002, 296, 1836-1838.
- 3.1.3. Mirkin, CA: Programming the Assembly of Two- and Three-Dimensional Architectures with DNA and Nanoscale Inorganic Building Blocks *Inorg. Chem.* 2000, 39 (11): 2258-2272.
- 3.1.4. Belaubre, P; Guirardel, M; Garcia, G; Pourciel, JB; Leberre, V; Dagkessamanskaia, A; Trévisiol, E; François, JM, Berguad, C: Fabrication of Biological Microarrays Using Microcantilevers *Appl. Phys. Lett.* 2003, 82 (18): 3122-3124.
- 3.1.5. Nyamjav, D; Ivanisevic, A: Alignment of Long DNA Molecules on Templates Generated Via Dip-Pen Nanolithography *Advanced Materials* 2003, 15 (21): 1805-1809.
- 3.1.6. Demers, LM; della Cioppa, G: Nanotechnology to Advance Discovery R&D – Tutorial: Dip Pen Nanolithography as a Next-Generation, Massively Parallel Nanoarray Platform *Genet. Eng. News* 2003, 23 (15): 36-+.
- 3.1.7. Zhang, G; Yan, X; Hou, XL: Binary DNA Arrays on Heterogeneous Patterned Surfaces *Langmuir* 2003, 19 (23): 9850-9854.
- 3.1.8. Zhou, D; Bruckbauer, A; Ying, LM: Building Three-Dimensional Surface Biological Assemblies on the Nanometer Scale *Nano Letters* 2003, 3 (11): 1517-1520.
- 3.1.9. Hu, J; Zhang, Y; Li, B; Gao, HB; Hartmann, U; Li, MQ: Nanomanipulation of single DNA molecules and its applications *Surf. Interface Anal.* 2004, 36 (2): 124-126.

- 3.1.10. Li, B; Wang, Y; Wu, H; Zhang, Y; Zhang, Z; Zhou, X; Li, M; Hu, J: Combined-dynamic mode "dip-pen" nanolithography and physically nanopatterning along single DNA molecules *Chin. Sci. Bull.* 2004, 49 (7): 665-667.
- 3.1.11. Chung, SW; Ginger, DS; Morales, MW; Zhang, Z; Chandrasekhar, V; Ratner, MA; Mirkin, CA: Top-down meets bottom-up: Dip-pen nanolithography and DNA-directed assembly of nanoscale electrical circuits *Small* 2005, 1 (1): 64-69.
- 3.1.12. Nyamjav, D; Ivanisevic, A: Templates for DNA-templated Fe₃O₄ nanoparticles *Biomaterials* 2005, 26 (15): 2749-2757.
- 3.1.13. Li, B; Zhang, Y; Hu, J; Li, MQ: Fabricating protein nanopatterns on a single DNA molecule with Dip-pen nanolithography *Ultramicroscopy* 2005 105 (1-4): 312-315.

3.2. Proteins

- 3.2.1. Lee, KB; Lim, JH; Mirkin, CA: Protein Nanostructures Formed Via Direct-Write Dip-Pen Nanolithography *J. Am. Chem. Soc.* 2003, 125 (19): 5588-5589.
- 3.2.2. Lim, JH; Ginger, DS; Lee, KB; Nam, JM; Mirkin, CA: Direct-Write Dip-Pen Nanolithography of Proteins on Modified Silicon Oxide Surfaces *Angew. Chem. Int. Ed.* 2003, 42, 2309-2312.
- 3.2.3. Lee, KB; Park, SJ; Mirkin, CA; Smith, JC; Mrksich, M: Protein Nanoarrays Generated by Dip-Pen Nanolithography *Science* 2002, 295, 1702-1705.
- 3.2.4. Hyun, J; Ahn, SJ; Lee, WK; Chilkoti, A; Zauscher, S: Molecular Recognition-Mediated Fabrication of Protein Nanostructures by Dip-Pen Lithography *Nano Letters* 2002, 2 (11): 1203-1207.
- 3.2.5. Wei, L; Hong, X; Guo, W; Bai, YB; Li, T. J.: Direct Fabrication of Protein Arrays Using Dip-Pen Nanolithography *Chem. J. Chin. Univ.* 2002, 23, 1386.
- 3.2.6. Hyun, J; Lee, WK; Nath, N; Chilkoti, A; Zauscher, S: Capture and release of proteins on the nanoscale by stimuli-responsive elastin-like polypeptide "switches" *JACS* 2004, 126 (23): 7330-7335.
- 3.2.7. Agarwal, G; Naik, RR; Stone, MO: Immobilization of Histidine-Tagged Proteins on Nickel by Electrochemical Dip Pen Nanolithography *J. Am. Chem. Soc.* 2003, 125, 7408-7412.
- 3.2.8. Kwak, SK; Lee, GS; Ahn, DJ; Choi, JW: Pattern formation of cytochrome c by microcontact printing and dip-pen nanolithography *Mat. Sci. Eng. C* 2004, 24 (1-2): 151-155.
- 3.2.9. Nam, JM; Han, SW; Lee, KB; Liu, X; Ratner, MA; Mirkin, CA: Bioactive protein nanoarrays on nickel oxide surfaces formed by dip-pen nanolithography *Angew. Chemie. Int. Ed.* 2004, 43 (10): 1246-1249.
- 3.2.10. Bruckbauer, A; Zhou, DJ; Kang, DJ; Korchev, YE; Abell, C; Klenerman, D: An addressable antibody nanoarray produced on a nanostructured surface *JACS* 2004, 126 (21): 6508-6509.
- 3.2.11. Lee, KB; Kim, EY; Mirkin, CA; Wolinsky, SM: The use of nanoarrays for highly sensitive and selective detection of human immunodeficiency virus type 1 in plasma *Nano Lett* 2004, 4 (10): 1869-1872.
- 3.2.12. Manandhar, P; Huang, L; Grubich, JR; Hutchinson, JW; Chase, PB; Hong, SH: Highly selective directed assembly of functional actomyosin on Au surfaces *Langmuir* 2005 21 (8): 3213-3216.
- 3.2.13. Li, B; Zhang, Y; Hu, J; Li, MQ: Fabricating protein nanopatterns on a single DNA molecule with Dip-pen nanolithography *Ultramicroscopy* 2005 105 (1-4): 312-315.
- 3.2.14. A. Tinazli, J. Piehler, M. Beuttler, R. Guckenberger and R. Tampe, Native protein nanolithography that can write, read and erase. *Nature Nanotechnology*, 2(4), 220-225 (2007).

3.3. Viruses

- 3.3.1. Smith, JC; Lee, KB; Wang, Q; Finn, MG; Johnson, JE; Mrksich, M; Mirkin, CA: Nanopatterning the Chemospecific Immobilization of Cowpea Mosaic Virus Capsid *Nano Letters* 2003, 3 (7): 883-886.

- 3.3.2. Cheung, CL; Camarero, JA; Woods, B; Lin, T; Johnson, JE; DeYoreo, JJ: Fabrication of Assembled Virus Nanostructures on Templates of Chemoselective Linkers by Scanning Probe Nanolithography *J. Am. Chem. Soc.* 2003, 125, 6848-6849.
- 3.3.3. Vega, RA; Maspoch, D; Salaita, K; Mirkin, CA: Nanoarrays of single virus particles *Angew. Chem. Intl. Ed.* 2005 44 (37): 6013-6015.

3.4. Other

- 3.4.1. Wilson, DL; Martin, R; Hong, S; Cronin-Golomb, M; Mirkin, CA; Kaplan, DL: Surface Organization and Nanopatterning of Collagen by Dip-Pen Nanolithography *Proc. Nat. Acad. Sci. USA* 2001, 98 (24): 13660-13664.
- 3.4.2. Agarwal, G; Sowards, LA; Naik, RR; Stone, MO: Dip-Pen Nanolithography in Tapping Mode *J. Am. Chem. Soc.* 2003, 125, 580-583.
- 3.4.3. Hong, X; Wei, L; Guo, W; Li, J; Song, WL; Bai, YB; Li, TJ: Direct Fabrication of Magnetite Nanoparticles Patterns Via "Dip-Pen" Nanolithography *Chem. J. Chin. Univ.* 2002, 23, 1778.
- 3.4.4. McKendry, R; Huck, WTS; Weeks, B; Florini, M; Abell, C; Rayment, T: Creating Nanoscale Patterns of Dendrimers on Silicon Surfaces with Dip-Pen Nanolithography *Nano Letters* 2002, 2 (7): 713-716.
- 3.4.5. Bruckbauer, A.; Zhou, DJ; Ying, LM; et al.: Multicomponent Submicron Features of Biomolecules Created by Voltage Controlled Deposition from a Nanopipet *JACS* 2003, 125 (32): 9834-9839.
- 3.4.6. Silva, GA: Introduction to Nanotechnology and Its Applications to Medicine *Surg. Neurol.* 2004, 61 (3): 216-220.
- 3.4.7. Auletta, T; Dordi, B; Mulder, A; Sartori, A; Onclin, S; Bruinink, CM; et al: Writing patterns of molecules on molecular printboards *Angew. Chemie. Int. Ed.* 2004, 43 (3): 369-373.
- 3.4.8. Hyun, J; Kim, J; Craig, SL; Chilkoti, A: Enzymatic nanolithography of a self-assembled oligonucleotide monolayer on gold *JACS* 2004, 126 (15): 4770-4771.
- 3.4.9. Yu, M; Ivanisevic, A: Encapsulated cells: An atomic force microscopy study *Biomaterials* 2004, 25 (17): 3655-3662.
- 3.4.10. Xu, P; Kaplan, DL: Nanoscale surface patterning of enzyme-catalyzed polymeric conducting wires *Adv. Mater.* 2004, 16 (7): 628-633.
- 3.4.11. Degenhart, GH; Dordi, B; Schonherr, H; Vancso, GJ: Micro- and nanofabrication of robust reactive arrays based on the covalent coupling of dendrimers to activated monolayers *Lang* 2004, 20 (15): 6216-6224.
- 3.4.12. Cho, Y; Ivanisevic, A: SiO_x surfaces with lithographic features composed of a TAT peptide *J. Phys. Chem. B* 2004, 108 (39): 15223-15228.
- 3.4.13. Zhou, HL; Li, Z; Wu, AG; Wei, G; Liu, Z: Direct patterning of rhodamine 6G molecules on mica by dip-pen nanolithography *App. Surf. Sci.* 2004, 236 (1-4): 18-24.
- 3.4.14. Jung, H; Dalal, CK; Kuntz, S; Shah, R; Collier, CP: Surfactant activated dip-pen nanolithography *Nano Letters* 2004, 4 (11): 2171-2177.
- 3.4.15. Leggett, GJ: Biological nanostructures: Platforms for analytical chemistry at the subzeptomolar level *Analyst* 2005, 130, 259-264.
- 3.4.16. Rozhok, S; Shen, CKF; Littler, PLH; Fan, ZF; Liu, C; Mirkin, CA; Holz, RC: Methods for fabricating microarrays of motile bacteria *Small* 2005 1 (4): 445-451.
- 3.4.17. Rosi, NL; Mirkin, CA: Nanostructures in biodiagnostics *Chemical Reviews* 2005 105 (4): 1547-1562.
- 3.4.18. Jiang, H; Stupp, SI: Dip-pen patterning and surface assembly of peptide amphiphiles *Langmuir* 2005 21: 5242-5246.
- 3.4.19. Willner, I., Baron, R., and Willner, B., Integrated nanoparticle-biomolecule systems for biosensing and bioelectronics. *Biosensors & Bioelectronics*, 2007. 22(9-10): p. 1841-1852.
- 3.4.20. Renault, N.K.M., Luciana; Alcocer, Marcos J.C., Biotechnologies in new high-throughput food allergy tests: why we need them. *Biotechnology Letters*, 2007. 29(3): p. 333-339.
- 3.4.21. S. Kidambi, C. Chan and I. Lee, Tunable resistive m-dPEG acid patterns on polyelectrolyte, multilayers at physiological conditions: Template for directed deposition of biomacromolecules. *Langmuir*, 24(1), 224-230 (2008).

4. Metal Inks

- 4.1.1. Li, Y; Maynor, B; Liu, J: Electrochemical AFM "Dip-Pen" Nanolithography and More *Chin. J. Inorg. Chem.* 2002, 18, 75.
- 4.1.2. Maynor, BW; Li, Y; Liu, J: Au "Ink" for AFM "Dip-Pen" Nanolithography *Langmuir* 2001, 17, 2575-2578.
- 4.1.3. Li, Y; Maynor, BW; Liu, J: Electrochemical AFM "Dip-Pen" Nanolithography *J. Am. Chem. Soc.* 2001, 123, 2105-2106.
- 4.1.4. Ben Ali, M; Ondarcuhu, T; Brust, M; Joachim, C: Atomic Force Microscope Tip Nanoprinting of Gold Nanoclusters *Langmuir* 2002, 18, 872-876.
- 4.1.5. Hurley, PT; Ribbe, AE; Buriak, JM: Nanopatterning of Alkynes on Hydrogen-Terminated Silicon Surfaces by Scanning Probe-Induced Cathodic Electrografting *JACS* 2003, 125 (37): 11334-11339.
- 4.1.6. Porter, LA; Ribbe, AE; Buriak, JM: Metallic Nanostructures Via Static Plowing Lithography *Nano Letters*, 2003, 3 (8): 1043-1047.
- 4.1.7. Zhang, H; Mirkin, CA: DPN-generated nanostructures made of gold, silver, and palladium *Chem. Mater.* 2004, 16 (8): 1480-1484.
- 4.1.8. Nelson, BA; King, WP; Laracuente, AR; Sheehan, PE; Whitman, LJ: Direct deposition of continuous metal nanostructures by thermal dip-pen nanolithography *Applied Physics Letters* 2006 88 (3): 033104.
- 4.1.9. Taha, H., Lewis, A., and Sukenik, C.: Controlled deposition of gold nanowires on semiconducting and nonconducting surfaces. *Nano Letters*, 2007. 7(7): p. 1883-1887.
- 4.1.10. Garno, J.C., Zangmeister, C.D., and Batteas, J.D.: Directed electroless growth of metal nanostructures on patterned self-assembled monolayers. *Langmuir*, 2007. 23(14): p. 7874-7879.
- 4.1.11. Kim, S. and Ehrman, S.H.: Capillary condensation onto titania (TiO₂) nanoparticle agglomerates. *Langmuir*, 2007. 23(5): p. 2497-2504.
- 4.1.12. Nguyen, B.T., Gautrot, J.D., Nguyen, M.T., and Zhu, X.X.: Nitocellulose-stabilized silver nanoparticles as low conversion temperature precursors useful for inkjet printed electronics. *Journal of Materials Chemistry*, 2007. Accepted for publication, January 2007.

5. Etch Resist & Whittling

- 5.1.1. Zhang, H; Chung, SW; Mirkin, CA: Fabrication of Sub-50-nm Solid-State Nanostructures on the Basis of Dip-Pen Nanolithography *Nano Letters* 2003, 3 (1): 43-45.
- 5.1.2. Zhang, Y; Salaita, K; Lim, JH; Mirkin, CA: Electrochemical Whittling of Organic Nanostructures *Nano Letters* 2002, 2 (12): 1389-1392.
- 5.1.3. Weinberger, DA; Hong, S; Mirkin, CA; Wessels, BW; Higgins, TB: Combinatorial Generation and Analysis of Nanometer- and Micrometer-Scale Silicon Features Via "Dip-Pen" Nanolithography and Wet Chemical Etching *Advanced Materials* 2000, 12 (21): 1600-1603.
- 5.1.4. Zhang, Y; Salaita, K; Lim, JH; Lee, KB; Mirkin, CA: A massively parallel electrochemical approach to the miniaturization of organic micro- and nanostructures on surfaces *Langmuir* 2004, 20 (3): 962-968.
- 5.1.5. Zhang, H; Jin, RC; Mirkin, CA: Synthesis of open-ended, cylindrical Au-Ag alloy nanostructures on a Si/SiO_x surface *Nano Letters* 2004, 4 (8): 1493-1495.
- 5.1.6. J. H. Wei and D. S. Ginger: A direct-write single-step positive etch resist for dip-pen nanolithography. *Small*, 3(12), 2034-2037 (2007).

6. Exotics

- 6.1.1. Su, M; Dravid, VP: Colored Ink Dip-Pen Nanolithography *Appl. Phys. Lett.* 2002, 80 (23): 4434-4436.

- 6.1.2. Matsubara, S; Yamamoto, H; Oshima, K; Mouri, E; Matsuoka, H: Fabrication of Nano-Structure by Diels-Alder Reaction *Chemistry Letters* 2002, 9, 886-887.
- 6.1.3. Wang, XF; Ryu KS; Bullen DA; Zou, J; Zhang, H; Mirkin, CA; Liu, C: Scanning Probe Contact Printing *Langmuir* 2003, 19 (21): 8951-8955.
- 6.1.4. Sheehan, PE; Whitman, LJ; King, WP; Nelson, BA: Nanoscale deposition of solid inks via thermal dip pen nanolithography *App. Phys. Lett.* 2004 85 (9): 1589.
- 6.1.5. Salaita, K; Amarnath, A; Maspoeh, D; Higgins, TB; Mirkin, CA: Spontaneous "phase separation" of patterned binary alkanethiol mixtures *JACS* 2005 127 (32): 11283-11287.
- 6.1.6. Lee, SW; Sanedrin, RG; Oh, BK; Mirkin, CA: Nanostructured polyelectrolyte multilayer organic thin films generated via parallel dip-pen nanolithography *Advanced Materials* 2005 17 (22): 2749-2753.
- 6.1.7. Nafday, OA; Weeks, BL; Haaheim, J; Eby, R: Patterning PETN and HMX using Dip Pen Nanolithography™ (DPN™) *Materials Research Society Symposium Proceedings* 2006 Vol. 896, H05-06:1-6.
- 6.1.8. Vijaykumar, T; John, NS; Kulkarni, GU: A resistless photolithography method for robust markers and electrodes *Solid State Sciences* 2005 7 (12): 1475-1478.
- 6.1.9. Ding, L; Li, Y; Chu, HB; Li, XM; Liu, J: Creation of cadmium sulfide nanostructures using AFM dip-pen nanolithography *Journal of Physical Chemistry B* 2005 109 (47): 22337-22340.
- 6.1.10. Weeks, BL; Vaughn, MW; DeYoreo, JJ: Direct imaging of meniscus formation in atomic force microscopy using environmental scanning electron microscopy *Langmuir* 2005 21 (18): 8096-8098.

7. Fundamental

- 7.1.1. Rozhok, S; Piner, R; Mirkin, CA: Dip-Pen Nanolithography: What Controls Ink Transport? *J. Phys. Chem. B* 2003, 107, 751-757.
- 7.1.2. Ivanisevic, A; McCumber, KV; Mirkin, CA: Site-Directed Exchange Studies with Combinatorial Libraries of Nanostructures *J. Am. Chem. Soc.* 2002, 124 (40): 11997-12001.
- 7.1.3. Ivanisevic, A; Mirkin, CA: "Dip-Pen" Nanolithography on Semiconductor Surfaces *J. Am. Chem. Soc.* 2001, 123, 7887-7889.
- 7.1.4. Mirkin, CA: Dip-pen nanolithography: Automated Fabrication of Custom Multicomponent, Sub-100-Nanometer Surface Architectures *MRS Bull.* 2001, 26, 535.
- 7.1.5. Mirkin, CA; Hong, S; Demers, LM: Dip-pen Nanolithography: Controlling Surface Architecture on the Sub-100 Nanometer Length Scale *ChemPhysChem* 2001, 2, 37-39.
- 7.1.6. Hong, S; Mirkin CA: A Nanoplotter with Both Parallel and Serial Writing Capabilities *Science* 2000, 288, 1808-1811.
- 7.1.7. Hong, S; Zhu, J; Mirkin, CA: A New Tool for Studying the In-Situ Growth Processes for Self-Assembled Monolayers Under Ambient Conditions *Langmuir*, 1999, 15, 7897-7900.
- 7.1.8. Hong S; Zhu, J; Mirkin CA: Multiple Ink Nanolithography: Toward a Multiple-Pen Nano-Plotter *Science* 1999, 286, 523-525.
- 7.1.9. Piner, RD; Zhu, J; Xu, F; Hong, S; Mirkin CA: "Dip-Pen" Nanolithography *Science* 1999, 283, 661-663.
- 7.1.10. Weeks, BL; Noy, A; Miller, AE; De Yoreo, JJ: Effect of Dissolution Kinetics on Feature Size in Dip-Pen Nanolithography *Phys. Rev. Lett.* 2002, 88 (25): 255505-1-255505-4.
- 7.1.11. Schwartz, PV: Molecular Transport From an Atomic Force Microscope Tip: A Comparative Study of Dip-Pen Nanolithography *Langmuir* 2002, 18, 4041-4046.
- 7.1.12. Sheehan, PE; Whitman, LJ: Thiol Diffusion and the Role of Humidity in "Dip Pen Nanolithography" *Phys. Rev. Lett.* 2002, 88 (15): 156104-1-156104-4.
- 7.1.13. Jang, JY; Schatz, GC; Ratner, MA: Liquid Meniscus Condensation in Dip-Pen Nanolithography *J. Chem. Phys.* 2002, 116 (9): 3875-3886.
- 7.1.14. Jang, JY; Hong, S; Schatz, GC; Ratner, MA: Self-Assembly of Ink Molecules in Dip-Pen Nanolithography: A Diffusion Model *J. Chem. Phys.* 2001, 115 (6): 2721-2729.
- 7.1.15. Amro, NA; Xu, S; Liu, GY: Patterning Surfaces Using Tip-Directed Displacement and Self-Assembly *Langmuir* 2000, 16, 3006-3009.

- 7.1.16. Zhang, HL; Guo, Y; Li, HL; Yang, DQ: AFM Controlled Selective Deposition of 1-Octadecanethiol on Gold *Chem. J. Chin. Univ.* 1999, 20, 1460.
- 7.1.17. Hamley, IW: Nanotechnology with Soft Materials *Angew. Chem. Int. Ed.* 2003, 42, 1692-1712.
- 7.1.18. Jang, J; Schatz, GC; Ratner, MA: Capillary Force on a Nanoscale Tip in Dip-Pen Nanolithography *Phys. Rev. Lett.* 2003, 90 (15): 156104-1-156104-4.
- 7.1.19. Manandhar, P; Jang, J; Schatz, GC; Ratner, MA; Hong, S: Anomalous Surface Diffusion in Nanoscale Direct Deposition Processes *Phys. Rev. Lett.* 2003, 90 (11): 115505-1-115505-4.
- 7.1.20. Huie, J: Guided Molecular Self-Assembly: A Review of Recent Efforts *Smart Mater. Struct.* 2003, 12, 264-271.
- 7.1.21. Kramer, S; Fuierer, RR; Gorman, CB: Scanning Probe Lithography Using Self-Assembled Monolayers *Chemical Reviews* 2003, 103 (11): 4367-4418.
- 7.1.22. Ginger, DS; Zhang, H; Mirkin, CA: The Evolution of Dip-Pen Nanolithography *Angew. Chem. Int. Ed.* 2004, 43 (1): 30-45.
- 7.1.23. Mirkin, CA; Rogers, JA: Emerging Methods for Micro- and Nanofabrication *MRS Bull.* 2001, 26, 506-509.
- 7.1.24. Mirkin, CA: Tweezers for the Nanotool Kit *Science*, 1999, 286, 2095-2096.
- 7.1.25. Jang, J; Schatz, GC; Ratner, MA: How Narrow Can a Meniscus Be? *Phys. Rev. Lett.* 2004, 92 (8): 085504-1-085504-4.
- 7.1.26. Zhou, H; Li, Z; Wu, A; Zheng, J; Zhang, J; Wu, S: The influence of tip performance on scanning probe lithography *Appl. Surf. Sci.* 2004, 221 (1-4): 402-407.
- 7.1.27. Leckenby, J; Eby, R: Toward industrial nanotechnology using a nanoscale patterning technique *Am. Lab.* 2004, 36 (1): 11-15.
- 7.1.28. Poggi, MA; Gadsby, ED; Bottomley, LA; King, WP; Oroudjev, E; Hansma, H: Scanning probe microscopy *Anal. Chem.* 2004, 76 (12): 3429-3443.
- 7.1.29. Barsotti, RJ; O'Connell, MS; Stellacci, F: Morphology control in self-assembled monolayers written by dip pen nanolithography *Langmuir* 2004, 20 (12): 4795-4798.
- 7.1.30. Rozhok, S; Sun, P; Piner, R; Lieberman, M; Mirkin, C: AFM study of water meniscus formation between an AFM tip and NaCl substrate *J Phys Chem B* 2004, 108 (23): 7814-7819.
- 7.1.31. Samori, P: Scanning probe microscopies beyond imaging *J. Mater. Chem.* 2004, 14 (9): 1353-1366.
- 7.1.32. Smith, RK; Lewis, PA; Weiss, PS: Patterning self-assembled monolayers *Prog. Surf. Sci.* 2004, 75 (1-2): 1-68.
- 7.1.33. Peterson, EJ; Weeks, BL; De Yoreo, JJ; Schwartz, PV: Effect of environmental conditions on dip pen nanolithography of mercaptohexadecanoic acid *J. Phys. Chem. B* 2004, 108 (39): 15206-15210.
- 7.1.34. Peter, M; Li, XM; Huskens, J; Reinhoudt, DN: Catalytic probe lithography: Catalyst-functionalized scanning probes as nanopens for nanofabrication on self-assembled monolayers *JACS* 2004, 126: 11684-11690.
- 7.1.35. Vesper, B; Salaita, K; Zong, H; Mirkin, CA: Surface-bound porphyrazines: Controlling reduction potentials of self-assembled monolayers through molecular proximity/orientation to a metal surface *JACS* 2004, 126: 16653-16658.
- 7.1.36. Haaheim, J: Dip pen nanolithography™ (DPN™) for nanomaterials discovery *Proceedings of Nanomaterials Conference* 2004.
- 7.1.37. Haaheim, J; Eby, R; Nelson, M; Fragala, J; Rosner, B; Zhang, H; Athas, G: Dip pen nanolithography (DPN): Process and instrument performance with Nanolnk's NSCRIPTOR system *Ultramicroscopy* 2005, 103 (2): 117-132.
- 7.1.38. Mulder, A; Onclin, S; Peter, M; Hoogenboom, JP; Beijleveld, H; ter Maat, J; Garcia-Parajo, MF; Ravoo, BJ; Huskens, J; van Hulst, NF; Reinhoudt, DN: Molecular printboards on silicon oxide: Lithographic patterning of cyclodextrin monolayers with multivalent, fluorescent guest molecules *Small* 2005 1 (2): 242-253.
- 7.1.39. Bruinink, CM; Nijhuis, CA; Peter, M; Dordi, B; Crespo-Biel, O; Auletta, T; Mulder, A; Schonherr, H; Vancso, GJ; Huskens, J; Reinhoudt, DN: Supramolecular microcontact

- printing and dip-pen nanolithography on molecular printboards *Chemistry-A European Journal* 2005 11 (13): 3988-3996.
- 7.1.40. Hampton, JR; Dameron, AA; Weiss, PA: Double-ink dip-pen nanolithography studies elucidate molecular transport *JACS* 2006 128 (5): 1648-1653.
- 7.1.41. Rosner, B; Duenas, T; Banerjee, D; Shile, R; Amro, N; Rendlen, J: Functional extensions of Dip Pen Nanolithography™: active probes and microfluidic ink delivery *Smart Materials & Structures* 2006 15 (1): S124-130.
- 7.1.42. Cho, N; Ryu, S; Kim, B; Schatz, GC; Hong, SH: Phase of molecular ink in nanoscale direct deposition processes *Journal of Chemical Physics* 2006 124 (2): 024714.
- 7.1.43. Lee, SW; Sanedrin, RG; Oh, BK; Mirkin, CA: Nanostructured polyelectrolyte multilayer organic thin films generated via parallel dip-pen nanolithography *Advanced Materials* 2005 17 (22): 2749-2753.
- 7.1.44. Stellacci, F: Towards industrial-scale molecular nanolithography *Advanced Functional Materials* 2006 16 (1): 15-16.
- 7.1.45. Antoncik, E: Dip-pen nanolithography: A simple diffusion model *Surface Science* 2005 599 (1-3): L369-L371.
- 7.1.46. Hampton, JR; Dameron, AA; Weiss, PS: Transport rates vary with deposition time in dip-pen nanolithography *Journal of Physical Chemistry B* 2005 109 (49): 23118-23120.
- 7.1.47. Su, M; Pan, ZX; Dravid, VP; Thundat, T: Locally enhanced relative humidity for scanning probe nanolithography *Langmuir* 2005 21 (24): 10902-10906.
- 7.1.48. Salaita, K; Lee, SW; Wang, X; Huang, L; Dellinger, TM; Liu, C; Mirkin, CA: Sub-100 nm, centimeter scale, parallel dip-pen nanolithography *Small* 2005 1 (10): 940-945.
- 7.1.49. Weeks, BL; Vaughn, MW; DeYoreo, JJ: Direct imaging of meniscus formation in atomic force microscopy using environmental scanning electron microscopy *Langmuir* 2005 21 (18): 8096-8098.
- 7.1.50. Wang, Y; MasPOCH, D; Zou, S; Schatz, GC; Smalley, RE; Mirkin, CA: Controlling the shape, orientation, and linkage of carbon nanotube features with nano affinity templates *Proceedings of the National Academy of Sciences* 2006 103 (7): 2026-2031.
- 7.1.51. Huck, W.T.S.: Self-assembly meets nanofabrication: Recent developments in microcontact printing and dip-pen nanolithography. *Angewandte Chemie-International Edition*, 2007. 46(16): p. 2754-2757.
- 7.1.52. Salaita, K., Wang, Y.H., and Mirkin, C.A.: Applications of dip-pen nanolithography. *Nature Nanotechnology*, 2007. 2(3): p. 145-155.
- 7.1.53. John, N.S. and Kulkarni, G.U.: Dip-pen lithography using pens of different thicknesses. *Journal of Nanoscience and Nanotechnology*, 2007. 7(3): p. 977-981.
- 7.1.54. Sharpe, R.B.A., Burdinski, D., Huskens, J., Zandvliet, H.J.W., Reinhoudt, D.N., and Poelsema, B.: Template-directed self-assembly of alkanethiol monolayers: Selective growth on preexisting monolayer edges. *Langmuir*, 2007. 23(3): p. 1141-1146.
- 7.1.55. Jang, J., Yang, M., and Schatz, G.: Microscopic origin of the humidity dependence of the adhesion force in atomic force microscopy. *Journal of Chemical Physics*, 2007. 126(17).
- 7.1.56. O. A. Nafday and B. L. Weeks: Feature size dependence on hysteresis due to relative humidity ramping and patterning order in dip-pen nanolithography. *Journal of Experimental Nanoscience*, 2(3), 229-237 (2007).

8. Polymers

- 8.1.1. Lim, JH; Mirkin, CA: Electrostatically Driven Dip-Pen Nanolithography of Conducting Polymers *Advanced Materials* 2002, 14 (20): 1474-1477.
- 8.1.2. Noy, A; Miller, AE; Klare, JE; Weeks, BL; Woods, BW; DeYoreo, JJ: Fabrication of Luminescent Nanostructures and Polymer Nanowires Using Dip-Pen Nanolithography *Nano Letters* 2002, 2 (2): 109-112.
- 8.1.3. Moraille, P; Badia, A: Nanoscale Stripe Patterns in Phospholipids Bilayers Formed by the Langmuir-Blodgett Technique *Langmuir* 2003, 19 (19): 8041-8049.
- 8.1.4. Jung, H; Kulkarni, R; Collier, CP: Dip-Pen Nanolithography of Reactive Alkoxysilanes on Glass *JACS* 2003, 125 (40): 12096-12097.

- 8.1.5. Liu, XG; Guo, SW; Mirkin, CA: Surface and Site-Specific Ring-Opening Metathesis Polymerization Initiated by Dip-Pen Nanolithography *Angew. Chem. Int. Ed.* 2003, 42 (39): 4785-4789.
- 8.1.6. Kaholek, M; Lee, WK; LaMattina, B; Caster, KC; Zauscher, S: Fabrication of Stimulus-Responsive Nanopatterned Polymer Brushes by Scanning-Probe Lithography *Nano Letters* 2004, 4 (2): 373-376.
- 8.1.7. Ma, H; Hyun, J; Stiller, P; Chilkoti, A: "Non-fouling" oligo(ethylene glycol)-functionalized polymer brushes synthesized by surface-initiated atom transfer radical polymerization *Adv. Mater.* 2004, 16 (4): 338-341.
- 8.1.8. Ming, S; Aslam, M; Fu, L; Wu, NQ; Dravid, VP: Dip-pen nanopatterning of photosensitive conducting polymer using a monomer ink *App. Phys. Lett.* 2004, 84 (21): 4200-4202.
- 8.1.9. Xu, P; Kaplan, DL: Nanoscale surface patterning of enzyme-catalyzed polymeric conducting wires *Adv. Mater.* 2004, 16 (7): 628-633.
- 8.1.10. Sheehan, PE; Whitman, LJ; King, WP; Nelson, BA: Nanoscale deposition of solid inks via thermal dip pen nanolithography *App. Phys. Lett.* 2004 85 (9): 1589.
- 8.1.11. Maynor, BW; Filocamo, SF; Grinstaff, MW; Liu, J: Direct-writing of polymer nanostructures: Poly (thiophene) nanowires on semiconducting and insulating surfaces *JACS* 2002, 124 (4): 522-523.
- 8.1.12. Su, M; Aslam, M; Fu, L; Wu, N; Dravid, VP: Dip-pen nanopatterning of photosensitive conducting polymer using a monomer ink *Appl. Phys. Lett.* 2004, 84 (21): 4200-4202.
- 8.1.13. Tang, Q; Shi, SQ; Huang, HT; Zhou, LM: Fabrication of highly oriented microstructures and nanostructures of ferroelectric P(VDF-TrFE) copolymer via dip-pen nanolithography *Superlattices and Microstructures* 2005, 36 (1-3): 21-29.
- 8.1.14. Coffey, DC; Ginger, DS: Patterning phase separation in polymer films with dip-pen nanolithography *JACS* 2005 127 (13): 4564-4565.
- 8.1.15. Fabre, B; Ababou-Girard, S; Solal, F: Covalent integration of pyrrolyl units with modified monocrystalline silicon surfaces for macroscale and sub-200nm-scale localized electropolymerization *J. Mater. Chem.* 2005 15 (26): 2575-2582.
- 8.1.16. Schenning, APHJ; Meijer, EW: Supramolecular electronics; nanowires from self-assembled pi-conjugated systems *Chem. Comm.* 2005 (26): 3245-3258.
- 8.1.17. Teixeira, F.S., Mansano, R.D., Salvadori, M.C., Cattani, M., and Brown, I.G.: Atomic force microscope nanolithography of polymethylmethacrylate polymer. *Review of Scientific Instruments*, 2007, 78(5).

9. Probe Technology & Ink Delivery

- 9.1.1. Zhang, M; Bullen, D; Chung, SW; Hong, S; Ryu, KS; Fan, ZF; Mirkin, CA; Liu, C: A MEMS Nanoplotter with High-Density Parallel Dip-Pen Nanolithography Probe Arrays *Nanotechnology* 2002, 13, 212-217.
- 9.1.2. Zou, J; Bullen, D; Wang, X; Liu, C; Mirkin, CA: Conductivity-Based Contact Sensing for Probe Arrays in Dip-Pen Nanolithography *Applied Physics Letters* 2003, 83 (3): 581-583.
- 9.1.3. Wang, XF; Ryu KS; Bullen DA; Zou, J; Zhang, H; Mirkin, CA; Liu, C: Scanning Probe Contact Printing *Langmuir* 2003, 19 (21): 8951-8955.
- 9.1.4. Bullen, D; Chung, SW; Wang, X; Zou, J; Mirkin, CA; Liu, C: Parallel dip-pen nanolithography with arrays of individually addressable cantilevers *App. Phys. Lett.* 2004, 84 (5): 789-791.
- 9.1.5. Rosner, B; Duenas, T; Banerjee, D; Shile, R; Amro, N; Rendlen, J: Active probes and microfluidic ink delivery for dip pen nanolithography™ *Proceedings of SPIE* 2004, 5275: 213-222.
- 9.1.6. Ryu, KS; Wang, X; Shaikh, K; Bullen, D; Goluch, E; Zou, J; Liu, C; Mirkin, CA: Integrated microfluidic linking chip for scanning probe nanolithography *App. Phys. Lett.* 2004, 85 (1): 136-138.
- 9.1.7. Zhang, H; Elghanian, R; Amro, NA; Disawal, S, Eby, R: Dip pen nanolithography stamp tip *Nano Letters* 2004, 4 (9): 1649-1655.

- 9.1.8. Bullen, D; Wang, XF; Zou, J; Chung, SW; Mirkin, CA; Liu, C: Design, fabrication, and characterization of thermally actuated probes arrays for dip pen nanolithography *J of Microelectr. Sys.* 2004, 13 (4): 594-602.
- 9.1.9. Wang, XF, Bullen, D; Zou, J; Liu, C; Mirkin, CA: Thermally actuated probe array for parallel dip-pen nanolithography *J. Vac. Sci. Technol. B* 2004, 22 (6): 2563-2567.
- 9.1.10. Banerjee, D; Amro, NA; Fragala, J: Optimizing microfluidic ink delivery for dip pen nanolithography *Proceedings of SPIE* 2004, 5345: 230-237.
- 9.1.11. Haaheim, J: Dip pen nanolithography™ (DPN™) for nanomaterials discovery *Proceedings of Nanomaterials Conference* 2004.
- 9.1.12. Gerding, JD; Willard, DM; Van Orden, A: Single-feature inking and stamping: A versatile approach to molecular patterning *JACS* 2005, 127 (4): 1106-1107.
- 9.1.13. Hampton, JR; Dameron, AA; Weiss, PA: Double-ink dip-pen nanolithography studies elucidate molecular transport *JACS* 2006 128 (5): 1648-1653.
- 9.1.14. Rosner, B; Duenas, T; Banerjee, D; Shile, R; Amro, N; Rendlen, J: Functional extensions of Dip Pen Nanolithography™: active probes and microfluidic ink delivery *Smart Materials & Structures* 2006 15 (1): S124-130.
- 9.1.15. Nelson, BA; King, WP; Laracuente, AR; Sheehan, PE; Whitman, LJ: Direct deposition of continuous metal nanostructures by thermal dip-pen nanolithography *Applied Physics Letters* 2006 88 (3): 033104.
- 9.1.16. Stellacci, F: Towards industrial-scale molecular nanolithography *Advanced Functional Materials* 2006 16 (1): 15-16.
- 9.1.17. Bullen, D; Liu, C: Electrostatically actuated dip pen nanolithography probe arrays *Sensors and Actuators A-Physical* 2006 125 (2): 504-511.
- 9.1.18. Hampton, JR; Dameron, AA; Weiss, PS: Transport rates vary with deposition time in dip-pen nanolithography *Journal of Physical Chemistry B* 2005 109 (49): 23118-23120.
- 9.1.19. Wang, XF; Liu, C: Multifunctional probe array for nano patterning and imaging *Nano Letters* 2005 5 (10): 1867-1872.
- 9.1.20. Salaita, K; Lee, SW; Wang, X; Huang, L; Dellinger, TM; Liu, C; Mirkin, CA: Sub-100 nm, centimeter scale, parallel dip-pen nanolithography *Small* 2005 1 (10): 940-945.
- 9.1.21. Lenhert, S., Sun, P., Wang, Y.H., Fuchs, H., and Mirkin, C.A.: Massively parallel dip-pen nanolithography of heterogeneous supported phospholipid multilayer patterns. *Small*, 2007. 3(1): p. 71-75.
- 9.1.22. Vega, R.A., Shen, C.K.F., Maspoch, D., Robach, J.G., Lamb, R.A., and Mirkin, C.A.: Monitoring single-cell infectivity from virus-particle nanoarrays fabricated by parallel dip-pen nanolithography. *Small*, 2007. 3(9): p. 1482-1485.
- 9.1.23. John, N.S. and Kulkarni, G.U.: Dip-pen lithography using pens of different thicknesses. *Journal of Nanoscience and Nanotechnology*, 2007. 7(3): p. 977-981.
- 9.1.24. Szoszkiewicz, R., Okada, T., Jones, S.C., Li, T.D., King, W.P., Marder, S.R., and Riedo, E.: High-speed, sub-15 nm feature size thermochemical nanolithography. *Nano Letters*, 2007. 7(4): p. 1064-1069.
- 9.1.25. Lee, J. and King, W.P.: Microcantilever hotplates: Design, fabrication, and characterization. *Sensors and Actuators A-Physical*, 2007. 136(1): p. 291-298.
- 9.1.26. Lenhert, S.S., Peng; Wang, Yuhuang; Fuchs, Harald; Mirkin, Chad A.: Massively parallel dip-pen nanolithography of heterogeneous supported phospholipid multilayer patterns. *Small*, 2007. 3(1): p. 71-75.
- 9.1.27. Szoszkiewicz, R., Okada, T., Jones, S.C., Li, T.D., King, W.P., Marder, S.R., and Riedo, E.: High-speed, sub-15 nm feature size thermochemical nanolithography. *Nano Letters*, 2007. 7(4): p. 1064-1069.

10. Reviews

- 10.1.1. Renault, N.K.M., Luciana; Alcocer, Marcos J.C.: Biotechnologies in new high-throughput food allergy tests: Why we need them. *Biotechnology Letters*, 2007. 29(3): p. 333-339.
- 10.1.2. Salaita, K., Wang, Y.H., and Mirkin, C.A.: Applications of dip-pen nanolithography. *Nature Nanotechnology*, 2007. 2(3): p. 145-155.

- 10.1.3. Haaheim, J., Tevaarwerk, E., Fragala, J., and Shile, R.: Dip Pen Nanolithography: A Maturing Technology for High Throughput Flexible Nanopatterning. *Proceedings of the Nano Science and Technology Institute*, 2007(May 2007).
- 10.1.4. Huck, W.T.S.: Self-assembly meets nanofabrication: Recent developments in microcontact printing and dip-pen nanolithography. *Angewandte Chemie-International Edition*, 2007. 46(16): p. 2754-2757.
- 10.1.5. C. A. Mirkin: The power of the pen: Development of massively parallel dip-pen nanolithography. *ACS Nano*, 1(2), 79-83 (2007).

This document can also be viewed on NanoInk's web site at:
<http://www.nanoink.net/JournalPublications.htm>.

For more information, please contact NanoInk Sales Department at sales@nanoink.net or 1-847-679-NANO.

All information herein is the property of NanoInk, Inc. All unauthorized use and reproduction is prohibited. Copyright © 2002-2008 NanoInk, Inc. All rights reserved. NanoInk, the NanoInk logo, Dip Pen Nanolithography, DPN, NSCRIPTOR, InkCAD, InkCal, Lattice, InkAlign, InkMap, InkFinder, Dots & Lines, DPNWorld, Get Small, Power of N, Building the Future, One Molecule at a Time, Just Add DNA, 2D nano PrintArray, Nanoencryption Technology, and Trace the Truth, are trademarks or registered trademarks of NanoInk, Inc.