

**CURRICULUM VITAE
EVA MARIE HARTH**

***Assistant Professor of Chemistry and Pharmacology
Vanderbilt University 7619 Stevenson Center, Nashville, TN***

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PROFESSIONAL PREPARATION

UNDERGRADUATE, GRADUATE, AND POSTDOCTORAL

Friederich-Wilhelms-University Bonn, Germany

Degree: B.D. in Organic Chemistry, Inorganic Chemistry, Physics, 1990

University of Zurich, Switzerland

Degree: B.S., M.S., Chemistry/Biochemistry, 1994

Thesis title: *Synthesis of unprotected α -manno-isopropylidene-fullerene*,

Advisor: Prof. A. Vasella, ETH Zurich

Max-Planck Institute for Polymer Research, University of Mainz, Germany

Degree: PhD. in Organic Chemistry, 1998

Thesis: *Synthesis and Properties of Fullerene Adducts and Polymers*

Advisor: Prof. K. Müllen, MPI Mainz

CPIMA Center for Polymeric Interfaces and Macromolecular Assemblies

Stanford University, IBM Almaden Research Center, San Jose, CA, USA

Postdoctoral Fellow, 1998-2001

Area: Living free Radical Polymerization Techniques, Dendrimers

Advisor: Prof. C. J. Hawker, IBM Almaden Research Center, now at UC Santa Barbara,

Director of MRL

XenoPort, Inc., Santa Clara, CA

Staff Scientist, 2001-2004

Area: Macromolecular Drug Delivery, Dendrimers

Scientific Advisor: Prof. J.M.J. Fréchet, UC Berkeley

RESEARCH FELLOWSHIPS AND AWARDS

NSF-CAREER Award 2007 (OMC)

Europa-Stipendium, Max-Planck Gesellschaft, Germany, 1994-1996

PROFESSIONAL SERVICE:

Vanderbilt Center for Science Outreach, GK12-program

Manuscript referee: for *Acta Biomaterialia*, *Biopolymers*, *Advanced Materials*, *Molecular Pharmaceutics*, *Macromolecules*, *Langmuir*, *Journal of the American Chemical Society JACS*, *Journal of Polymer Science, Part A: Polymer Chemistry*, *Bioconjugate Chemistry*, *Chemical Communication*, *Small*, *Department of Energy (DoE)*, *National Science Foundation (NSF)*, *ACS- PRF*

Organizer: SERMACS 2008: Session Nanomaterials

Co-Organizer ACS meeting 2008 in New Orleans, LA: Session: Drug Delivery System

Gordon Research Conference, Polymers East, 2003, Discussion Leader

Gordon Research Conference, Polymers East, 2007, Discussion Leader

Gordon Research Conference, Macromolecular Architectures, 2009, Discussion Leader

Editorial Advisory Board: European Journal of Polymer Science (EJP, Elsevier), Macromolecules (ACS)

APPOINTMENTS : Research

Assistant Professor of Pharmacology, Department of Pharmacology, VU School of Medicine, 3/2006-present
 Assistant Professor of Chemistry, Department of Chemistry, VU College of A&S, 8/2004- present
 Staff Scientist Xenoport, Inc., Santa Clara, CA, 2001-2004
 Postdoctoral Fellow, CPIMA, Stanford University, IBM Almaden Research Center, 1998-2001
 Research Assistant, University of Mainz, 1998

Teaching Experience

Instructor: Course 218 B1 (honors): Advanced Placement Organic (undergraduate) Spring 2006/ 2007/2008
 Instructor: Course 235: Polymer Chemistry and Surface Chemistry, (graduate) Fall 2005
 Instructor: Short Course in Polymer Science, Fisk University/IGERT, Summer 2005/ 2006
 Instructor: Course 350 Materials Science A: Soft Materials (graduate) Fall 2004/ 2006/2008
 Part-time Instructor for Organic Chemistry, San Francisco State University, 2002
 Assistant, University of Mainz, Laboratory Introductory Course, 1996

Publications:

1. Van der Ende, A.; Croce, T.; Hamilton, K.; Sathiyakumar, V.; Harth, E. **Tailored Polyester Nanoparticles: Post-Modification with Dendritic Transporter and Targeting Units via Reductive Amination and Thiol-ene Chemistry**, 2008, *Soft Matter*, in press, DOI: 10.1039, B 820379B.
2. Hamilton, S.K.; Ikizler, M.R.; Wallen, C.; Wright, P.F.; Harth, E. **Effective Delivery of IgG antibodies into infected cells via IgGMT conjugate**, *Molecular Biosystems*, 2008, 4, 1209-1211. (**Article highlighted** in the November issue of *Chemical Biology*, RSC)
3. Van der Ende, A.E.; Kravitz, E.J.; Harth E. **Approach to Formation of Multifunctional Polyester Particles in Controlled Nanoscopic Dimensions**, *Journal of the American Chemical Society*, 2008, 130, 8706-8713.
4. Adkins, C.T.; Harth, E. **Synthesis of Star Polymer Architectures with Site-Isolated Chromophore Cores** *Macromolecules*, 2008, 41(10); 3472-3480.
5. Somarajan, S.; Hasan, S.A.; Adkins, C.T.; Harth, E.; Dickerson, J.H. **Controlled Electrophoretic Deposition of Uniquely Nanostructured Star Polymer Films** *Journal of Physical Chemistry B*, 2008, 112(1), 23-28.
6. Huang, K.; Croce, T.A.; Hamilton, S.K.; Adkins, C.T.; Evans, B.L. III.; Harth, E. "Effective Drug Therapies from Functional, Macromolecular Building Blocks with a Biomimetic Design" *Macromol. Symp.* 2007, 255, 20-23. (**cover pic**)
7. Croce, T., Hamilton, S.K., Chen, M.L., Muchalski, H., Harth, E., **Alternative o-chinodimethane crosslinking precursors for intramolecular chain collapse nanoparticles**. *Macromolecules*, 2007, 40(17),6028-6031.
8. Huang, K., Voss, B., E., Kumar, D., Hamm, H. E., Harth, E., **Highly targeted intracellular delivery: Tailored dendritic molecular transporter**. *Bioconjugate Chemistry*, 2007, 18, 403-409.
9. Harth, E., Croce, T.A., **Carving out niches for nanostructures: Implementation and interplay of building blocks, methods and tools**. *Australian Journal of Chemistry*, 2006, 59, 525-533.
10. Chung, I.D.; Britt, P.; Xie, D.; Harth, E.; Mays, J., **Synthesis of amino acid-based polymers via atom transfer radical polymerization in aqueous media at ambient temperature**. *Chemical Communication*, 2005, 1046.
11. Drockenmuller, E.; Li, L.Y.T.; Ryu, D. Y.; Harth, E.; Russell, T.P.; Kim, H.C.; Hawker, C.J. **Covalent Stabilization of Nanostructures: Robust Block Copolymer Templates from Novel Thermoactive Systems**. *Journal of Polymer Science Part A - Polymer Chemistry*. 2005, 43, 1028.
12. Götze, H.; Harth, E.; Schiller, S.M.; Frank, C. W.; Knoll, W.; Hawker, C.J., **Synthesis of lipo-glycopolymers amphiphiles by nitroxide-mediated living free-radical polymerization** *Journal of Polymer Science Part A-Polymer Chemistry*, 2002, 40, 3379.
13. Harth, E.; Van Horn, B.; Lee, V.Y.; Germack, D.S.; Gonzales, C.P.; Miller, R.D.; Hawker, C.J. **A facile approach to architecturally defined nanoparticles via intramolecular chain collapse**. *Journal of the American Chemical Society* 2002, 124, 8653.

14. Blomberg, S.; Ostberg, S.; Harth, E.; Bosman, A.W.; Van Horn, B.; Hawker, C.J. **Production of crosslinked, hollow nanoparticles by surface-initiated living free-radical polymerization** *Journal of Polymer Science Part A-Polymer Chemistry*, 2002, 40, 1309.
15. Harth, E.; Hecht, S.; Helms, B.A.; Malmstrom, E.E.; Frechet, J.M.J.; Hawker, C.J. **The effect of macromolecular architecture in nanomaterials: A comparison of site isolation in porphyrin core dendrimers and their isomeric linear analogs.** *Journal of the American Chemical Society*, 2002, 124, 3926.
16. Hawker, C.J.; Bosman, A.W.; Harth, E.; **New polymer synthesis by nitroxide mediated living radical polymerizations.** *Chemical Reviews*, 2001, 101, 3661.
17. Harth, E.; Bosman, A.W.; Benoit, D.; Helms, B.; Frechet, J.M.J.; Hawker, C.J. **A practical approach to the living polymerization of functional monomers: Application to block copolymers and 3-dimensional macromolecular architectures.** *Macromolecular Symposium* 2001, 174, 85.
18. Harth, E.; Hawker, C.J.; Fan, W.; Waymouth, R.M. **Chain end functionalization in nitroxide-mediated free radical polymerizations.** *Macromolecules*. 2001, 34, 3856.
19. Harth, E.; Van Horn, B.; Hawker, C.J. **Acceleration in nitroxide mediated 'living' free radical polymerizations.** *Chemical Communications*. 2001, 9, 823.
20. Rodlert, M.; Harth, E.; Rees, I.; Hawker, C.J. **End-group fidelity in nitroxide-mediated living free radical polymerizations** *Journal of Polymer Science Part A-Polymer Chemistry*, 2000, 38, 4749.
21. Benoit, D.; Harth, E.; Fox, P.; Waymouth R.M.; Hawker C.J. **Accurate structural control and block formation in the living polymerization of 1,3-dienes by nitroxide-mediated procedures** *Macromolecules*, 2000, 33, 363.
22. Schubert, U.S.; Weidl, C.H.; Cattani, C.; Eschbaumer, C.; Newcome, G.R.; He, E.; Harth, E.; Mullen, K.; **Metallosupramolecular-fullerene assemblies and polymers,** *Polym. Prep*, 2000, 41(1), 229.
23. Schubert, U.S.; Weidl, C.H.; Rapta, P.; Harth, E.; Mullen, K.; **Metallo-supramolecular fullerene architectures: Synthesis and characterization of bucky ligands and a non-covalent dimer.** *Chemistry Letters*, 1999, 9, 949.
24. Kallinger, C.; Haugeneder, M.; Haugeneder, A.; Lemmer, U.; Spirkl, W.; Feldmann, J.; Scherf, U.; Harth, E.; Gugel, A.; Mullen, K. **Control of electron transfer in conjugated polymer fullerene heterostructures** *Synthetic Metals*, 1999, 101(1-3), 285.
25. Hong, H.; Davidov, D.; Kallinger, C.; Lemmer, U.; Feldmann, J.; Harth, E.; Gugel, A.; Mullen, K. **Self-assembly of functionalized fullerenes.** *Synthetic Metals*, 1999, 102(1-3), 1487.
26. Haugeneder, A.; Neges, M.; Kallinger, C.; Spirkl, W.; Lemmer, U.; Feldmann, J.; Scherf, U.; Harth, E.; Gugel, A.; Mullen, K. **Exiton diffusion and dissociation in conjugated fullerene blends and heterostructures.** *Physical Review B-Condensed Matter* 1999, 59 (23), 15346.
27. Kocher, M.; Daubler, T.K.; Harth, E.; Scherf, U.; Gugel, A.; Neher, D. **Photoconductivity of an inorganic/organic composite containing dye-sensitized nanocrystalline titanium dioxide.** *Applied Physical Letters*, 1998, 72(6), 650.
28. Kallinger, C.; Haugeneder, A.; Lemmer, U.; Feldmann, J.; Hong H.; Tarabia, M.; Daviov, D.; Harth, E.; Walter, M.; Scherf, U.; Gugel, A.; Mullen, K., in *Molecular Nanostructures*, edited by Kuzmany, H.; Fink, J.; Mehring, M.; Roth, S.; (World Scientific, Singnapore, 1997), 515.
29. Gugel, A.; Belik, P.; Walter, M.; Kraus, A.; Harth, E.; Wagner, M.; Spickermann, J.; Mullen, K. **The repetitive Diels-Alder reaction □ A new approach to [60]fullerene main-chain polymers.** *Tetrahedron* 1996, 52(14), 5007.
30. Jonas, U.; Cardullo, F.; Belik, P.; Diederich F.; Gugel, A.; Harth, E.; Herrmann, A.; Isaacs, L.; Mullen, K.; Ringsdorf, H.; Thilgen, C.; Uhlmann, P.; Vasella, A.; Waldraff, C.A.A.; Walter, M. **Synthesis of a fullerene[60] cryptate and systematic Langmuir-Blodgett and thin-film investigations of amphiphilic fullerene derivatives.** *Chemistry-A European Journal*, 1995, 1(4), 243.
31. Uhlmann, P.; Harth, E.; Naughton, A.B.; Vasella A. **Glycosylidene carbenes 20: Synthesis of deprotected, spiro-linked C-Glycosides of C-60.** *Helvetica Chimica Acta* 1994, 77(8), 2335.

Conference Proceedings not listed
Invited Presentations: about 40 not listed

Issued Patent: one
Provisional Patents: two