

From N to P: Examining Structure-Property Relationships of Ammonium- and Phosphonium-Containing Macromolecules

Sean T. Hemp

Dissertation submitted to the faculty of the Virginia Polytechnic Institute and State University in partial fulfillment of the requirements for the degree of

Doctor of Philosophy
In
Chemistry

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Blacksburg, VA

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Chapter 2

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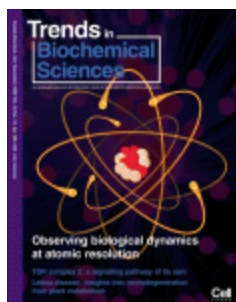
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Author: Struther Arnott

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Date: June 2006

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Copolymers Containing
Complementary Nucleobase
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Author: Brian D. Mather et al.
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Polymerization: Use of
Uridine and Adenosine
Derivatized Monomers and
Initiators

Author: Andrew Marsh,* , Afzal
Khan,David M. Haddleton,*
and, and Michael J. Hannon

Publication: Macromolecules

Publisher: American Chemical Society

Date: Dec 1, 1999

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Author: Xiao Zhang

Publication: Journal of Polymer Research

Publisher: Springer

Date: Jan 1, 2009

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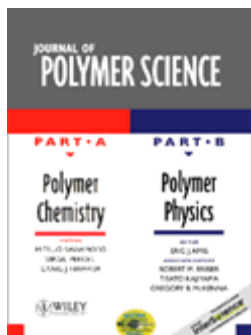


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Title: Nucleobases modified azo-polysiloxanes, materials with potential application in biomolecules nanomanipulation

Author: Nicolae Hurduc, Ramona Enea, Dan Scutaru, Liviu Sacarescu, Bogdan C. Donose, Anh V. Nguyen

Publication: Journal of Polymer Science
Part A: Polymer Chemistry

Publisher: John Wiley and Sons

Date: Jul 31, 2007

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Author: Maria Luisa Navacchia,Laura Favaretto,Emanuele Treossi,Vincenzo Palermo,Giovanna Barbarella

Publication: Macromolecular Rapid Communications

Publisher: John Wiley and Sons

Date: Dec 3, 2009

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Title: A Reversible and Highly Selective Fluorescent Sensor for Mercury(II) Using Poly(thiophene)s that Contain Thymine Moieties

Author: Yanli Tang, Fang He, Minghui Yu, Fude Feng, Lingling An, Huan Sun, Shu Wang, Yuliang Li, Daoben Zhu

Publication: Macromolecular Rapid Communications

Publisher: John Wiley and Sons

Date: Mar 2, 2006

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Title: Association of Star-Shaped Poly(d,l-lactide)s Containing Nucleobase Multiple Hydrogen Bonding

Author: Afia S. Karikari, Brian D. Mather, and, and Timothy E. Long*

Publication: Biomacromolecules

Publisher: American Chemical Society

Date: Jan 1, 2007

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Publication: Biophysical Journal
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Polyelectrolytes for Nonviral
Gene Delivery
Author: Sean T. Hemp, Michael H.
Allen, Jr., Matthew D. Green,
and Timothy E. Long
Publication: Biomacromolecules
Publisher: American Chemical Society
Date: Jan 1, 2012
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Title: Comparing Ammonium and Phosphonium Polymerized Ionic Liquids: Thermal Analysis, Conductivity, and Morphology

Author: Sean T. Hemp, Mingqiang Zhang, Michael H. Allen, Shijing Cheng, Robert B. Moore, Timothy E. Long

Publication: Macromolecular Chemistry and Physics

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Date: Aug 6, 2013

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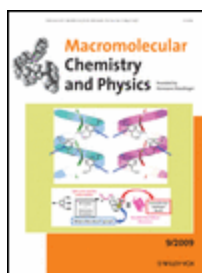
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Author: Sean T. Hemp,Mingqiang Zhang,Michael H. Allen,Shijing Cheng,Robert B. Moore,Timothy E. Long

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Publication: Biomacromolecules
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Chapter 7



Title: Phosphonium-Containing
Diblock Copolymers for
Enhanced Colloidal Stability
and Efficient Nucleic Acid
Delivery

Author: Sean T. Hemp, Adam E.
Smith, Joshua M. Bryson,
Michael H. Allen, Jr., and
Timothy E. Long

Publication: Biomacromolecules

Publisher: American Chemical Society

Date: Aug 1, 2012

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Phosphonium ionenes from well-defined step-growth polymerization: thermal and melt rheological properties

S. T. Hemp, M. Zhang, M. Tamami and T. E. Long, *Polym. Chem.*, 2013, **4**, 3582

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