

# Eric R. Bittner Curriculum Vita

*Department of Chemistry, University of Houston, Houston TX 77204*

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## (1.) Professional Preparation

- Ph.D in Chemistry, 1994, The University of Chicago, Chicago, IL. Thesis title: Quantum Theories of Energy Exchange at the Gas-Surface Interface.
- B. S. with High Honors and Honors Work in Chemistry and Physics 1988, Valparaiso University, Valparaiso, IN. Majors in Chemistry and Physics, Minor in Mathematics.

## (2.) Appointments

- **Present: University of Houston.**  
(2003-) Associate Professor of Theoretical Chemistry  
(1997-2003) Assistant Professor of Theoretical Chemistry
- **2001 (summer) Los Alamos National Lab**  
Visiting Faculty, Center for Non-Linear Studies
- **1996-1997 Stanford University.**  
Visiting Scholar, Mentor: Hans C. Andersen.
- **1994-1996 The University of Texas at Austin.**  
NSF Postdoctoral Fellow, Mentor: Peter J. Rossky.
- **1988-1994 The University of Chicago.**  
Graduate Student, Thesis Advisor: John C. Light.
- **1986 (summer) University of Michigan.**  
Undergraduate Researcher, Advisor: Robert L. Kuczkowski.

## (3.) Fellowships, Honors, and Awards

- John Simon Guggenheim Fellow, 2007.
- Wiley/International Journal of Quantum Chemistry Young Investigator Award, 2003.
- National Science Foundation CAREER Award, 1999.
- National Science Foundation Postdoctoral Fellowship in Chemistry, 1995-97.
- Elizabeth A. Norris Award for excellence in graduate research, The University of Chicago, 1994.
- Lumina Award, Valparaiso University, 1988.

## (4.) Selected Publications (62 total as of March 22, 2007)

1. Frenkel exciton model of ultrafast excited state dynamics in AT DNA double helices, Eric R. Bittner, J. Photochemistry and Photobiology A-in press , (2007).
2. Exciton dissociation at donor-acceptor polymer heterojunctions: quantum nonadiabatic dynamics and effective mode analysis, Hiroyuki Tamura, Eric R. Bittner, and Irene Burghardt, J. Chem. Phys., 126, 021103 (2007).
3. Lattice model of ultrafast exciton and charge-transfer dynamics in DNA, Eric R. Bittner, J. Chem. Phys. 125 , 094909 (2006).
4. Time-convolutionless master equation for mesoscopic electron-phonon systems, Andrey Pereverzev and Eric R. Bittner, J. Chem. Phys. 125 , 104906 (2006).

5. Exciton Regeneration Dynamics in Model Donor-Acceptor Polymer Heterojunctions, John Glen S. Ramon and E. R. Bittner, *J. Phys. Chem. B* 110 , 21001-21009 (2006).
6. A self-consistent field quantum hydrodynamic approach for molecular clusters , Sean Derrickson and Eric R. Bittner, *J. Phys. Chem A* 110 , 5333 (2006). (Note: John Light Festschrift)
7. Quantum transport in chains with noisy off-diagonal couplings, Andrey Pereverzev and E. R. Bittner, *J. Chem. Phys.* 123 , 244903 (2005).
8. Exciton Dissociation Dynamics in Model Donor-Acceptor Polymer Heterojunctions: I. Energetics and Spectra, E. R. Bittner, J. G. S. Ramon, and S. Karabunarliev, *J. Chem. Phys.* 122 , 214719 (2005).
9. Current producing states in molecular semiconductors: photo-current from a molecular wire, E. R. Bittner, A. Ye, and S. Karabunarliev, *J. Chem. Phys.* 122 , 034707 (2005).
10. Electroluminescence yield in donor-acceptor co-polymers and diblock-polymers: A comparative theoretical study, S. Karabunarliev and E. R. Bittner, *J. Phys. Chem. B* 108 , 10219 (2004). (Gerald Small Festschrift)
11. Dissipative dynamics of spin-dependent electron-hole capture in conjugated polymers, S. Karabunarliev and E. R. Bittner, *J. Chem. Phys.* 119 , 3988 (2003).
12. Spin dependent electron-hole recombination kinetics in luminescent organic polymers, S. Karabunarliev and E. R. Bittner, *Phys. Rev. Lett.* 90 , 057402 (2003).

#### (5.) Synergistic Activities

- American Physical Society Committee on Careers and Professional Develop
- Guest Editor, *Journal of Physical Chemistry B*. (Festschrift honoring Robert E. Wyatt)
- Co-organizer: 2nd PRC workshop on "Energy Flow Dynamics in Biomaterial Systems" (Paris, 2007)
- Member of ACS, ACS, MRS, AAAS.

#### (6.) Collaborators

*Co-authors over past 3 yrs.*

- Dr. Irene Burghardt, CNRS, Ecole-Normale Superior, Paris.
- Prof. Robert Wyatt, University of Texas at Austin
- Dr. Laura Herz, Oxford University.
- Dr. Brian Kendrick, Los Alamos National Laboratory
- Prof. Lorenz Cederbaum, Univ. of Heidelberg.

*Former Advisors and Mentors*

- Prof. Peter Rossky, University of Texas at Austin.
- Prof. Hans Andersen, Stanford University.
- Prof. John C. Light, University of Chicago.

*Former Ph. D. Students and Postdoctoral Advisees*

- Prof. Gilbert Claudio: (Ph. D. May-03). Currently Assistant Professor of Science, University of Asia and Pacific, Philippines.
- Prof. Stoyan H. Karabunarliev, Department of Physics, Univ. Borgas, Bulgaria. Visiting Assistant Prof., Jan. 2000-present.

- Dr. Mark Kobrak, (Postdoc/VAP: Jan 98-Dec 99)  
Currently: Associate Professor of Chemistry, Brooklyn College (CUNY).
- Dr. Daniel Kosov (Postdoc: Jan 98-Dec 98)  
Currently: Assistant Professor of Chemistry and Physics, University of Maryland.