Curriculum Vitae

Education

Period	**2010 — 2014**	Leiden Institute of Chemistry
PhD.	**Computational Quantum Mechanics**	
	Supervised by Dr. F. Buda and Prof. Dr. H.J.M. de Groot.	
	Title: *Coherent Dynamics in Solar Energy Transduction.*	
Period	**2007 — 2010**	Leiden University
MSc.	**Physical & Theoretical Chemistry**	
	Thesis with Dr. F. Buda and Prof. Dr. H.J.M. de Groot (grade for thesis: **10**).	
	Thesis subject: *Asymmetry in Reaction Centers.*	
	Extra-curricular: Honours Class, Science Based Business.	
	Certificate: Financial Markets Summer School, London School of Economics (2009).	
Period	**2002 — 2007**	Delft University of Technology
BSc.	**Molecular Science and Technology**	
	Thesis with Prof. Dr. L.D.A. Siebbeles and Dr. J.M. Schins (grade for thesis: **10**).	
	Thesis subject: *Excited State and Charge Photogeneration Dynamics in P3HT and P3HT/PCBM blends.*	
	Majors: Molecular Quantum Mechanics, Physical Chemistry.	
	Minors: Economics, Sustainable Energy.	
Period	**2001 — 2002**	Delft University of Technology
	Technology, Policy and Management	
	$\longrightarrow$ Propedeutic exam.	
Period	**1994 — 2000**	Sint Ignatius Gymnasium

Languages

English	**Native**
Dutch	**Native**
Italian	**Fluent**
German	**Proficient**
French	**Basic**

Programming & Software

Fortran Bash Unix Matlab Igor Pro LaTeX

OCTOPUS CPMD Gaussian Amsterdam Density Functional

Conference Proceedings

- Thomas J. Eisenmayer, Huub J. M. de Groot, Francesco Buda. *Real-Time Simulations of Photoinduced Processes*, CHAINS, (Veldhoven, 2014). **Talk**
- Thomas J. Eisenmayer, Huub J. M. de Groot, Francesco Buda. *Charge Transfer and Coherent Dynamics*, Physics@FOM, (Veldhoven, 2014). **Talk**
- Thomas J. Eisenmayer, Huub J. M. de Groot, Francesco Buda. *From Photosynthesis to Solar Fuel*, Holland Research School of Molecular Chemistry, (Naturalis, 2013). **Talk**
- Thomas J. Eisenmayer, A. Monti, J. Rombouts, Huub J. M. de Groot, Francesco Buda. *In Silico Design of Novel Charge Separators*, European Science Foundation, (Torun, 2013). **Talk**
- Thomas J. Eisenmayer, Huub J. M. de Groot, J. Neugebauer, Francesco Buda. *Mechanism and Reaction Coordinate of Directional Charge Separation in Bacterial Reaction Centers*, Study group Spectroscopy and Theory, (Utrecht, 2012). **Talk**
- Jorge Piris, Thomas J. Eisenmayer, Minh T. Trinh, Juleon M. Schins and Laurens D.A. Siebbeles: *Photoexcitations and Charge Generation Dynamics in P3HT/PCBM Blended Films Studied by Ultrafast Transient Absorption Spectroscopy*. Materials Research Society, Symposium H: Nanostructured Solar Cells (Boston, 2007). **Abstract**

List of Publications

- T. J. Eisenmayer, F. Buda. "Real-Time Simulations of Photoinduced Coherent Charge Transfer and Proton-Coupled Electron Transfer", *ChemPhysChem*, **2014**, 15 (15), pp 3258-3263.
  DOI: 10.1002/cphc.201402444

  --→ **Chapters 5 and 7** of this thesis.

- T. J. Eisenmayer, H. J. M. de Groot, E. van de Wetering, J. Neugebauer, F. Buda, "Mechanism and Reaction Coordinate of Directional Charge Separation in Bacterial Reaction Centers", *Journal of Physical Chemistry Letters*, **2012**, 3, pp 694-697.
  DOI: 10.1021/jz201695p

  --→ **Chapter 3** of this thesis.

- T. J. Eisenmayer, J. A. Lasave, A. Monti, H. J. M. de Groot, F. Buda, "Proton Displacements Coupled to Primary Electron Transfer in the Rhodobacter Sphaeroides Reaction Center", *Journal of Physical Chemistry B*, **2013**, 38, pp 11162-11168.
  DOI: 10.1021/jp401195t

  --→ **Chapter 4** of this thesis.

- K. S. Joya, J. L. Valles-Pardo, Y. F. Joya, T. J. Eisenmayer, B. Thomas, F. Buda, H. J. M. de Groot, "Molecular Catalytic Assemblies for Electro-driven Water Splitting", **2013**, *ChemPlusChem*, 78, pp 35-47.
  DOI: 10.1002/cplu.201200161

- T. J. Eisenmayer, J. Marcelis, H. J. M. de Groot and F. Buda, **2014**, "Redox levels and Oxidation Potential in Photosystem II: A DFT investigation", *to be submitted*.

  --→ **Chapter 6** of this thesis.

- **2015**, "A Practical Quantum Theory for Efficient Solar Energy Transduction", *in preparation*.

  --→ **Outlook** of this thesis.