André Mirtschink

PERSONAL

Birth date:	22 Nov 1985
Birth place:	Räckelwitz, Germany
Address:	Van Baerlestraat 132-1 1071 BD Amsterdam The Netherlands
E-mail:	andre.mirtschink@gmail.com
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EDUCATION

Doctorate 29 Jan 2015

Department of Theoretical Chemistry,
VU University Amsterdam, The Netherlands

Supervisor: Paola Gori-Giorgi, Evert Jan Baerends
Title: Energy Density Functionals From the Strong-Interaction Limit of Density Functional Theory

Diplom Chemiker 6 Jul 2009

Department of Theoretical Chemistry,
University of Technology Dresden, Germany

Supervisor: Gotthard Seifert
Topic: Reducing Empiricism in Binding Energy Calculations Within the DFTB Method

EMPLOYMENT

Postdoctoral Fellow Nov 2014 - Mar 2015

Department of Theoretical Chemistry,
VU University Amsterdam, The Netherlands

PhD Candidate Nov 2010 - Oct 2014

Department of Theoretical Chemistry,
Free University Amsterdam, The Netherlands

Leonardo Da Vinci Fellow Feb - Aug 2010

Quantum Chemistry and Physics Laboratory,
The National Center for Scientific Research/Paul Sabatier University, Toulouse, France

Researcher Nov 2009 - Dec 2009

Department of Physics,
Federal University of Santa Catarina, Florianopolis, Brazil

Researcher Sept 2009 - Oct 2009

Department of Theoretical Chemistry,
University of Technology Dresden, Germany

Research Assistant Feb 2007 - Sept 2008

Department of Theoretical Chemistry,
University of Technology Dresden, Germany

Research Assistant Mar 2005

Fraunhofer Institute for Electron Beam-, Plasma Technology,
Dresden, Germany

Research Assistant Feb 2004

Fraunhofer Institute for Ceramic Technologies and Systems,
Dresden, Germany

VISITING SCIENTIST

NanoBio Spectroscopy Group, Apr 2014
The University of the Basque Country UPV/EHU, Donostia-San Sebastian, Spain

NanoBio Spectroscopy Group, Aug - Oct 2013
The University of the Basque Country UPV/EHU, Donostia-San Sebastian, Spain

Department of Theoretical Chemistry, Nov - Dec 2010
University of Science and Technology Pohang, South-Korea

HONORS

Leonardo Da Vinci Fellowship, European Union, Feb - Aug 2010

OTHERS

Talks

"The Derivative Discontinuity in the Strog-Interaction Limit of Density Functional Theory", NWO-CW Study group meeting "Chemistry in Relation to Physics and Material Sciences", Veldhoven, The Netherlands, 10 Feb 2014, accepted talk

"Travelling the Adiabatic Connection: Towards New Exchange-Correlation Functionals", Department of Theoretical Chemistry, University of Technology Dresden, Germany, 25 May 2011, invited group seminar

PUBLICATIONS

Number of publications:	10	*Researched-ID:*	C-9355-2015
H-index:	4		
Times cited:	47		

Top publications

1. *"The derivative discontinuity in the strong-interaction limit of density functional theory"*
   A. Mirtschink, M. Seidl and P. Gori-Giorgi
   Phys. Rev. Lett. **111**, 126402 (2013)
2. *"Energy density functionals from the strong-coupling limit applied to the anions of the He isoelectronic series"*
   A. Mirtschink, C. J. Umrigar, J. D. Morgan III and P. Gori-Giorgi
   J. Chem. Phys. **140**, 18A532 (2014), invited article for special issue "Advances in Density Functional Theory"
3. *"Energy densities in the strong-interaction limit of density functional theory"* A. Mirtschink, M. Seidl and P. Gori-Giorgi
   J. Chem. Theory Comput. **8**, 3097 (2012)
4. *"Modeling Charge Resonance in Cationic Molecular Clusters: Combining DFT-Tight Binding with Configuration Interaction"*
   M. Rapacioli, F. Spiegelman , A. Scemama and A. Mirtschink
   J. Chem. Theory Comput. **7**, 44 (2011)
5. *"Kohn-Sham density functional theory for quantum wires in arbitrary correlation regimes"*
   F. Malet, A. Mirtschink, J. C. Cremon, S. M. Reimann and P. Gori-Giorgi
   Phys. Rev. B **87**, 115146 (2013), highlighted as editor's suggestion

Peer-reviewed journals

8. *"Hydrogen molecule dissociation curve with functionals based on the strictly-correlated regime"*
   S. Vuckovic, L. O. Wagner, A. Mirtschink and P. Gori-Giorgi
   J. Chem. Theory Comput. **11**, 3153 (2015)
7. *"Density functional theory for strongly correlated dipolar ultracold gases"*
   F. Malet, A. Mirtschink, C. B. Mendl, J. Bjerlin, E. Karabulut, S. Reiman and P. Gori-Giorgi
   Phys. Rev. Lett. **115**, 033006 (2015), selected as editor's suggestion
6. *"Energy density functionals from the strong-coupling limit applied to the anions of the He isoelectronic series"*
   A. Mirtschink, C. J. Umrigar, J. D. Morgan III and P. Gori-Giorgi
   J. Chem. Phys. **140**, 18A532 (2014), invited article for special issue "Advances in Density Functional Theory"
5. *"Exchange-correlation functionals from the strongly interacting limit of DFT: Applications to model chemical systems"*
   F. Malet, A. Mirtschink, K. J. H. Giesbertz, L. O. Wagner and P. Gori-Giorgi
   Phys. Chem. Chem. Phys. **16**, 14551 (2014)
4. *"The derivative discontinuity in the strong-interaction limit of density functional theory"*
   A. Mirtschink, M. Seidl and P. Gori-Giorgi
   Phys. Rev. Lett. **111**, 126402 (2013)
3. *"Kohn-Sham density functional theory for quantum wires in arbitrary correlation regimes"*
   F. Malet, A. Mirtschink, J. C. Cremon, S. M. Reimann and P. Gori-Giorgi
   Phys. Rev. B **87**, 115146 (2013), selected as editor's suggestion
2. *"Energy densities in the strong-interaction limit of density functional theory"* A. Mirtschink, M. Seidl and P. Gori-Giorgi
   J. Chem. Theory Comput. **8**, 3097 (2012)
1. *"Modeling Charge Resonance in Cationic Molecular Clusters: Combining DFT-Tight Binding with Configuration Interaction"*
   M. Rapacioli, F. Spiegelman , A. Scemama and A. Mirtschink
   J. Chem. Theory Comput. **7**, 44 (2011)

Book chapters

1. *"Density functional theory for strongly interacting electrons"*
   F. Malet, A. Mirtschink, K. J. H. Giesbertz and P. Gori-Giorgi
   in *"Many-Electron Approaches in Physics, Chemistry and Mathematics"*, 153, Springer International Publishing, Switzerland (2014)

Conference proceedings

1. *"PAH-related Very Small Grains in photodissociation regions: implications from molecular simulations"*
   M. Rapacioli, F. Spiegelman, B. Joalland, A. Simon, A. Mirtschink, C. Joblin, J. Montillaud, O. Bern and D. Talbi
   EAS Publications Series, **46**, 223 (2011)