

CURRICULUM VITAE

Daniele Fausti

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EDUCATION:

Phd degree in Physics, Zernike institute for Advanced Materials, University of Groningen (Jun, 2008). Thesis title: “Phase transition and optically induced phenomena in cooperative Advisor: Prof. Paul H. M. van Loosdrecht.

Degree in Physics, Dipartimento Matematica e Fisica, Università Cattolica Brescia ” (Dec, 2002). Thesis title: “Electron Dynamics at Surfaces” (“Dinamiche elettroniche di superficie”).

High School Diploma, (Maturità scientifica), at “Liceo A. Calini” Brescia (Italy).

WORKING EXPERIENCES

Researcher at the physics department of the University of Trieste (summer 2010-present).

Postdoctoral Associate at the Max Plank Group for Structural Dynamics, Hamburg (2008-2010).

Visiting Scientist, Clarendon Labs, University of Oxford (2009-2010).

Phd Student at the Zernike institute for advanced Material, Groningen University (2003-2008)

Research Scholarship, Elphos labs, Catholic University Brescia (01/2003-05/2003)

TEACHING EXPERIENCES and RELEVANT SKILLS:

Bases of Quantum Optics (“Elementi di ottica quantistica”), University of Trieste (2011)

Various working classes in “Condensed matter courses” in the Rug Groningen (2006-2007), and “Electrodynamics” in the University of Trieste (2010).

Supervision of various master and bachelor students.

Report writing, proof-reading and editing experience gained from dissertation and report writing at university.

Enjoy working in a team or independently.

Good organizational skills and proficiency in oral presentation as a result of assessed courses at university.

SCHOOLS and TRAININGS

- “Winter college on biophotonics : Optical Imaging and Manipulation of Molecules and Cells” (2003 Italy).
 - Ameland Phd summer school (2004 e 2006 Netherlands).
 - Goal oriented planning and working (2005, Netherlands).
 - The art of presenting physics (2006, Netherlands).
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- Business Orientation Programme (Nyenrode Business University) (Netherlands, 2007).

CONFERENCE CONTRIBUTIONS

- Korrelationstage 2011 (Dresden, 2011, Contributed talk)
- Ultrafast phenomena (USA, 2010, Contributed talk and Poster).
- LEES 2010 (Geneva, Contributed talk).
- “*Ultrafast phenomena in cooperative systems*” (2010, USA, Poster).
- Ultrafast phenomena (Italy, 2008, Poster).
- “*Ultrafast phenomena in cooperative systems*” (2008, Italy, Poster).
- “*Ultrafast Dynamics of Collective Excitations in Solids*” (Germany, 2005, Poster).
- “*Ultrafast phenomena in cooperative systems*” (2006, USA, Poster)
- “*Collective quantum states in low-dimensional transition metal oxides*” (Germany, 2005, Poster).
- Veldhoven Fom annual meeting (2004, 2005, 2006, 2007 e 2008, Netherlands, Poster and Contributed Talks).
- Vlieland Msc meeting (2003 e 2005, Netherlands, Poster).
- “*Workshop on Novel States and Phase Transitions in Highly Correlated Matter*” (Italy, 2004, Poster).

INVITED TALKS

- Invited talk to “PIPT4” (Warsaw, 2011)
- Invited talk to “Terahertz spectroscopy and its high-field applications” (Dresden, 2010).
- Invited talk to Emrs 2008 fall meeting (Warsaw, Poland).
- I have been also invited to present my work in different institutions; recently in Desy (Hamburg), Elettra (Trieste) and Konstanz University (Konstanz), ICFO (Barcelona), IIT (Milan).

PEER REVIEWED PUBLICATIONS

(To date 19-09-2011 citations 182, h-factor 8)

1) A. Dienst, M. Hoffmann, D. Fausti, S. Pyon, T. Takayama, H. Takagi, A. Cavalleri - “Ultrafast bi-directional gating of superconducting transport in cuprates”, *Nature Photonics* 5, 485-488 (2011).

2) D. Fausti, R.I. Tobey, N. Dean, S. Kaiser, A. Dienst, M. Hoffmann, S. Pyon, T. Takayama, H. Takagi, A. Cavalleri - “Superconductivity in Striped $L_{a1.675}E_{u0.2}S_{r0.125}CuO_4$ by Mode-selective Lattice Excitation”, *Science*, Vol. 331, 189 (2011).

3) A. Dienst, D. Fausti, M. Hoffman, S. Pyon, T. Takayama, H. Takagi, A. Cavalleri – “Electromagnetically Induced Transparency in a Superconducting Cuprate by Nonlinear Excitation of Discrete Josephson” [Submitted].

4) N. Dean, J. C. Petersen, D. Fausti, R.I. Tobey, S. Kaiser, L. V. Gasparov, H. Berger, and A. Cavalleri - “Polaronic conductivity in the photoinduced phase of 1T-TaS₂”, *Phys. Rev. Lett.*, Vol 106, 016401 (2011).

5) U. Adem, L. Wang, D. Fausti, P.H.M. van Loosdrecht, A. Vasiliev, L. N. Bezmaternykh, B. Buchner, C. Hess, and R. Klingeler – “Magnetodielectric and magnetoelastic coupling in $TbFe_3(BO_3)_4$ ”, *Phys. Rev. B*, 82, 064406 (2010).

6) D. M. Sagar, D. Fausti, S. van Smaalen, and P. H. M. van Loosdrecht – “Raman signatures of

charge ordering in $K_{0.3}WO_3$ ”, Phys. Rev. B. 81, 045124 (2010).

7) D. Fausti, O. V. Misochko, and P. H. M. van Loosdrecht - “Ultrafast photoinduced structure phase transition in antimony single crystals”, Phys. Rev. B. (Rapid Comm.) 161207 (2009) [this paper was awarded the “editor’s suggestions”]

8) Y. Zhang, A. A. Broekhuis, M. C. A. Stuart, T. Fernandez Landaluce, D. Fausti, P. Rudolf and F. Picchioni - “Cross-Linking of Multiwalled Carbon Nanotubes with Polymeric Amines”, Macromolecules, 2008, 41 (16), pp 6141–6146

9) T. T. A. Lummen, I. P. Handayani, M. C. Donker, D. Fausti, G. Dhahenne, P. Berthet, A. Revcolevschi, and P. H. M. van Loosdrecht - “Phonon and crystal field excitations in geometrically frustrated rare earth titanates”, Phys. Rev. B 77, 214310 (2008)

10) R. Macovez, J. Luzon, J. Schiessling, A. Sadoc, L. Kjøeldgaard, S. van Smaalen, D. Fausti, P. H. M. van Loosdrecht, R. Broer, and P. Rudolf - “Hybridization, superexchange, and competing magnetoelastic interactions in TiOBr”, Phys. Rev. B 76, 205111 (2007)

11) D. M. Sagar, D. Fausti, S. Yue, C. A. Kuntscher, S. van Smaalen and P. H. M. van Loosdrecht - “A Raman study of the charge-density-wave state in $A(0.3)MoO_3$ ($A=K, Rb$)”, New Journal of physics, Vol.10, 023043 (2008)

12) D. Fausti, T. T. Lummen, C. Angelescu, R. Macovez, J. Luzon, R. Broer, P. Rudolf, N. Tristan, B. Büchner, S. van Smaalen, A. Möller, G. Meyer, T. Taetz, P. H. M. van Loosdrecht - “Symmetry disquisition on the TiOX phase diagram ($X=Br, Cl$)” - Phys. Rev. B **75**, 245114 (2007).

13) D. M. Sagar, A. A. Tsvetkov, D. Fausti, S. van Smaalen and P. H. M. van Loosdrecht - “Coherent amplitudon generation in blue bronze through ultrafast interband quasi-particle decay” - J. Phys.: Condens. Matter 19 (2007) 346208.

14) D. Fausti, A. A. Nugroho, P. H. M. van Loosdrecht, S. A. Klimin, M. N. Popova, and L. N. Bezmaternykh - “Raman scattering from phonons and magnons in $RFe_3(BO_3)_4$ ” - PHYS. REV. B 74, 024403 (2006).

15) S. A. Klimin, D. Fausti, A. Meetsma, L. N. Bezmaternykh, P. H. M. van Loosdrecht and T. T. M. Palstra - “Evidence for differentiation in the iron-helicoidal chain in $GdFe_3(BO_3)_4$ ” - ACTA CRYST. B 61: 481-485 (2005).

16) F. Banfi, C. Giannetti, G. Ferrini, G. Galimberti, S. Pagliara, D. Fausti, and F. Parmigiani - “Experimental evidence of above-threshold photoemission in solids” - PHYS. REV. LET. 94: 037601 (2005).

17) C. Giannetti, G. Galimberti, S. Pagliara, G. Ferrini, F. Banfi, D. Fausti and F. Parmigiani - “Measurements of intrinsic linewidth versus parallel momentum of image-potential states on $Ag(100)$ ” - SURF. SCI. 566: 502-507 (2004).

18) G. Ferrini, C. Giannetti, G. Galimberti, S. Pagliara, D. Fausti, F. Banfi, and F. Parmigiani - “Violation of the electric-dipole selection rules in indirect multiphoton excitation of image-potential states on $Ag(100)$ ” - PHYS. REV. LET. 92, 256802 (2004).

19) R. Z. Levitin, E. A. Popova, R. M. Chtsherbov, A. N. Vasiliev, M. N. Popova, E. P. Chukalina, S. A. Klimin, P. H. M. van Loosdrecht, D. Fausti and L. N. Bezmaternykh - “Cascade of phase transitions in $GdFe_3(BO_3)_4$ ” - JETP LETTERS 79, 423 (2004).

20) G. Ferrini, C. Giannetti, D. Fausti, G. Galimberti, M. Peloi, G. Banfi, and F. Parmigiani - “Effective mass and momentum-resolved intrinsic linewidth of image-potential states on $Ag(100)$ ” - PHYS. REV. B 67 (23) 235407 (2003).

OTHER PUBLICATIONS

Book Chapter: Following the request of the editors Rohit P. Prasankumar and Antoinette J. Taylor, in collaboration with P. H. M. van Loosdrecht, I wrote a part of the book: “Optical Techniques for Characterizing Complex Matter”, that will be published by the publisher “Taylor & Francis”. I wrote a chapter dedicated to dynamical Raman studies on condensed matter titled: “Time resolved Raman spectroscopy”.

Phd Thesis: “Phase transition and optically induced phenomena in cooperative systems”.

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Online: <http://dissertations.ub.rug.nl/faculties/science/2008/d.fausti/>

27-10-2010

Daniele Fausti
