

Claudiu Daniel Stanciu

Eindhoven, The Netherlands
cd.stanciu@gmail.com, www.stanciu.nl
+31653477062

Personal information

Date of birth:	December 20 th , 1979	Gender:	Male
Nationality:	Romanian	Marital status:	Married

Education

2004 - 2008	PhD in the group Spectroscopy of Solids and Interfaces at the Radboud University Nijmegen, The Netherlands Field: Magneto-Optics ; PhD thesis: Laser-Induced Femtosecond Magnetic Recording
2002 - 2003	MSc at the Physics Faculty, West University of Timisoara, Romania Field: Magnetic Nano-systems
1998 - 2002	BSc at the Physics Faculty, West University of Timisoara, Romania Field: Physics of Materials
1994 - 1998	Industrial High School, Pitesti, Romania Field: Electronics and Electrotechnics

Work Experience

2008 - Present **Research & Development, Océ Technologies, Venlo, The Netherlands**

Team leading experience at Océ:

Research Team Leader, (December 2008 – present)

Task: Provide solutions in the field of Liquid-Surface interaction and Energy Efficient printing methods

Responsibilities: Planning, initiating and executing research activities, coordination, control resources and budget, management reporting, maintain alignment with internal stakeholders, coaching of 3-6 group members (from HBO to PhD level in the field of physics, chemistry, material science), recruiting activities

Result: Lead a research project from an idea phase to the product Development phase, and successfully transferred to Development

Idea Management Team Leader - Ideation, (December 2009 – present)

Task: Identifying, defining and implementing, at R&D level, a method to manage the fuzzy front end of Innovation

Responsibilities: planning, literature search, communication with internal and external partners and stakeholders, management reporting; organizing and coordinating idea generation, collection and evaluation process

Result: Successfully implemented an Idea Management tooling, currently considered to be extended to the whole organization (including Business Units and Operational Companies) and partially adopted by Corporate Venturing

Technical experience at Océ:

R&D Scientist, (March 2008 – present)

Task: Investigate the feasibility of new UV curing systems & of Liquid-Surface Interaction

Responsibilities: literature research, performing experiments, data analysis and reporting

Result: demonstrated the feasibility of a new UV curing method

Business experience at Océ:

Technology environment analysis, R&D (June 2009 – December 2009)

Task: Perform environment market analysis of a disruptive printing technology

Responsibilities: customer visits, analysis of competitor positioning, added value of the specific technology to the customer and end-user, and impact of new competitor technology on Océ products and strategy

Result: The results and view on the market and technologies obtained here has been discussed in to the yearly strategic plan meeting of a Strategic Business Unit and lead to new product definition

Strategic market segmentation study, for the Strategic Department of a Business Unit (March 2009 – June 2009)

Task: Define a new segmentation of core business market to better cluster the relevant customers

Responsibilities: Literature research, market analysis, reporting to BU management

Result: Developed new market segmentation framework used for strategy definition within a business unit

Product/Market study, R&D and Strategic Business Unit (October 2008 – May 2009)

2004 - 2008

PhD related work

Junior Researcher at the Institute for Molecules and Materials, Nijmegen, The Netherlands (2004 – 2008),

Task: Search for new effects in the field of ultrafast magneto-optics

Responsibilities: literature research, design set-up, perform experiments, analyze data, write journal articles

Main achievement: **demonstrated the feasibility of a mechanism previously believed impossible:** magnets can be manipulated purely by light. With that the bit value in magnetic memory devices such as Hard Disk Drives can be changed ~50.000 times faster than the fastest conventional memory, thus **breaking** what was previously called **the speed limit of magnetic recording**.

The results achieved here have been patented and cited in the world press news such as Nature, Science, PCWorld, PhysicsWorld, The Register, etc. and recognized via international awards.

Intern at Seagate Technology Research, Pittsburgh, USA (one month, 2007)

Task & Responsibilities: Following the discovery of a new data storage technology made during my PhD, my role was to transfer this knowledge to Seagate and further develop this technique for application in Hard Disk Drives

Result: demonstrated feasibility of this technique for applications in data storage devices

Research Guest at Institute de Physique et Chimie des Materiaux de Strasbourg, France (one month, 2006)

Task & Responsibilities: train a team of scientists in the field of laser-induced magnetization reversal

Result: The visited group adopted and started the research on the new effect mentioned above

2002 - 2004

Physicist at the National R&D Institute for Welding and Materials Testing, Timisoara, Romania.

Awards and Achievements

- | | |
|------|--|
| 2010 | Umicore Scientific Award , March 2010
10.000 EUR award for an original contribution in the field of material science or sustainable energy related topics granted by The Belgian Fonds de la Recherche Scientifique, for my PhD thesis. Presented in front of an audience of researchers, academic staff, Umicore's management and representatives from Belgium government and industry. |
| 2007 | First Prize for the best poster presentation at the NanoNed Symposium, Nijmegen, The Netherlands , December 7 |
| 2007 | Best Poster Presentation Award at the IMM symposium, Radboud University Nijmegen, The Netherlands , May 8 |
| 2006 | Best Poster Presentation Award at the MORIS 2006 Workshop on Thermal & Optical Magnetic Materials and Devices, Tomiura, Chiba, Japan , June 6 - June 8 |
| 2005 | Best Poster Presentation Award at the 50th Magnetism and Magnetic Materials conference, San Jose, California, USA , October 30 - November 3 |
| 1998 | Laureate at the national phase of the Multidisciplinary Contest on Electronics and Electrotechnics, Romania |

Patent Applications

- 2008 "Rapid Manufacturing method using magneto-optical mask and contact exposure or proximity exposure", Jamar, Jac, Maalderink, Hessel, Lusse, Patrick, Stanciu, Daniel, **patent application**.
- 2006 "Magneto-optical switching device and method for switching a magnetizable medium", C. D. Stanciu, F. Hansteen, A. V. Kimel, A. Kirilyuk, A. Tsukamoto, A. Itoh, and Th. Rasing, **International Patent** WO2007136243.
- 2003 "Air purification installation", C. D. Stanciu and Zeno Schlett, **Romanian Patent** RO122185 (B1).

Extraprofessional Activities and Others

- Volunteer work** Active member of the Student Union at the West University of Timisoara (OSUT), Romania (1998-2002):
(2001 - 2002) **Vice-President** at OSUT, Romania: Representing students' rights (of about 20.000 students);
(2000 - 2001) **Manager of the Relations-Information** department at OSUT - relations of the student organization with the local, national and international organizations.
Co-Organizer of student events: International Student Art Festival (StudentFest), Musical Festival (TMBASE and Underground).
- Webmaster** Webmaster of the Institute for Molecules and Materials webpage (2005-2007) Nijmegen, The Netherlands .
- Languages** English (fluent, written and spoken) – working language for the last 7 years
Romanian (native speaker)
Dutch (beginner)
- Hobbies** I enjoy playing guitar, travelling and discovering new cultures.

Publications and Invited Talks

Journal Articles

- 1) J. Hohlfeld, C. D. Stanciu, and A. Rebei, "Athermal all-optical femtosecond magnetization reversal in GdFeCo", *Appl. Phys. Lett.* 94, 152504 (2009).
- 2) C. D. Stanciu, A. Tsukamoto, A. V. Kimel, F. Hansteen, A. Kirilyuk, A. Itoh, and Th. Rasing, "Sub-picosecond Magnetization Reversal Across Ferrimagnetic Compensation Points", *Phys. Rev. Lett.* 99, 217204 (2007).
- 3) C. D. Stanciu, F. Hansteen, A. V. Kimel, A. Kirilyuk, A. Tsukamoto, A. Itoh, and Th. Rasing, "All-optical magnetic recording by circularly polarized light", *Phys. Rev. Lett.* 99, 047601 (2007).
- 4) C. D. Stanciu, F. Hansteen, A. V. Kimel, A. Tsukamoto, A. Itoh, A. Kirilyuk, and Th. Rasing, "Ultrafast Interaction of the Angular Momentum of Photons with Spins in the Metallic Amorphous Alloy GdFeCo", *Phys. Rev. Lett.* 98, 207401 (2007).
- 5) A. V. Kimel, C. D. Stanciu, P. A. Usachev, R. V. Pisarev, V. N. Gridnev, A. Kirilyuk, and Th. Rasing, "Optical excitation of antiferromagnetic resonance in TmFeO₃", *Phys. Rev. B* 74, 060403 (2006) (Rapid Communications).
- 6) C. D. Stanciu, A. V. Kimel, F. Hansteen, A. Tsukamoto, A. Itoh, A. Kirilyuk, and Th. Rasing, "Ultrafast spin dynamics across compensation points in ferrimagnetic GdFeCo: The role of angular momentum compensation", *Phys. Rev. B* 73, 220402 (2006) (Rapid Communications).

Other Publications

C. D. Stanciu, F. Hansteen, A. V. Kimel, A. Kirilyuk, A. Tsukamoto, A. Itoh, and Th. Rasing, "Breaking the Speed Limit of Magnetic Recording", **Highlights in the Annual Report of the Institute for Molecules and Materials**, Nijmegen, The Netherlands, 2006.

The article Nr. 3 has been selected as "Editors' Suggestions" and presented on the **Cover of Physical Review Letters**.

This article has been also cited in the **World Press News**, e.g.:

Science - *ScienceNOW* Daily News, 28 June 2007, *Lighting a Fire Under Hard Drives* by Phil Berardelli

Nature - *As quick as light*, by David Gevaux (Nature Photonics, Vol. 1, pag. 494, September 2007).

Physics News Update - The American Institute of Physics Bulletin of Physics News Number 830 June 27, 2007 *All-Optical Magnetic Recording* by Phillip F. Schewe, Ben Stein

PCWorld - *Lasers Give Disk Drives a Huge Boost* by Chris Mellor, Techworld

PhysicsWorld - *Laser flips magnetic bit without any help* by Hamish Johnston

Heise - 28.06.2007 *Laser schreibt auf Festplatte*

Optics.org - IOP Publishing on Jul 19, 2007, *Lasers speed up magnetic data recording* by Marie Freebody

ZDNet.com - *Laser innovation speeds up hard disks* by Matt Loney

Noorderlicht - *Bliksemsnelle harde schijf: Magnetisch schrijven met laserlicht* by Ronald Veldhuizen

Invited Talks

The 52nd Magnetism and Magnetic Materials Conference (MMM), November 2007, Tampa, Florida, USA
All-optical femtosecond magnetic recording

MORIS 2007 Workshop on Thermal & Optical Magnetic Materials and Devices, September 2007, Pittsburgh, USA
All-optical femtosecond magnetic recording

Workshop on Future Technology for Magnetic Recording and Phenomena, June 2006, Tokyo, Japan
Ultrafast Magnetization Reversal