

CIRICULUM VITAE

1. PERSONAL

Name, Title : Derya ATAÇ, M.Sc.

Date of Birth-Place : March 2nd 1984- Balıkesir, Turkey

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2. EDUCATION

Doctor of Philosophy: University of Twente (Enschede, the Netherlands), Faculty of Electrical Engineering, Mathematics and Computer Science (EEMCS), Group Nano Electronics. (2010-June 2014, expected).

Thesis title: Tuning electron transport in metal films and graphene with organic monolayers (Supervisor: Prof. Dr. Wilfred G. van der Wiel).

Master of Science: İzmir Institute of Technology (İzmir, Turkey), Faculty of Science, Department of Physics (2006-2009).

Thesis title: Growth and Characterization of Aluminium Doped Transparent and Conductive Zinc Oxide Thin Films. (Supervisor: Assoc. Prof. Dr. Yusuf SELAMET).

Bachelor of Science: Dokuz Eylül University (İzmir, Turkey), Faculty of Education, Department of Physics Education (2002-2007).

3. ACADEMIC EXPERIENCE AND DUTIES

Researcher in Group NanoElectronics (2010-...) MESA+ Institute for Nanotechnology, University of Twente (Enschede, The Netherlands).

Assigned duties: Supervising bachelor students. (*Completed supervised project:* The Kondo effect in cobalt phthalocyanine coated graphene field effect transistors, Pepijn Beekman).

Research and Teaching Assistant (2008-2010) in Izmir Institute of Technology (IZTECH), Department of Physics (İzmir, Turkey).

Assigned duties: Giving various undergrad labs courses (taught in English).

4. CURRENT RESEARCH PROJECT

- Investigating the electron-impurity interactions and the Kondo effect in thin hybrid organic-inorganic thin film systems that are doped with dilute magnetic impurities.
- Utilizing self-assembled monolayers as doping elements
- Investigating transport properties of graphene sheets with/without magnetic impurities.

5. PUBLICATIONS

1. **D. Ataç**, T. Gang, M.D. Yilmaz, S.K. Bose, A.T.M. Lenferink, C. Otto, M.P. de Jong, J. Huskens and W.G. van der Wiel “Tuning the Kondo effect in thin Au films by depositing a thin layer of Au on molecular spin-dopants.” *Nanotechnology* **2013** *24* **375204**
(doi:10.1088/0957-4484/24/37/375204)
2. T. Gang, M. Deniz Yilmaz, **D. Ataç**, S. K. Bose, E. Strambini, A. H. Velders, M. P. de Jong, J. Huskens and W. G. van der Wiel “Tunable doping of a metal with molecular spins” *Nature Nanotech.*, **2012**, *Vol.7*, **232-236**
(doi:10.1038/nnano.2012.1)
3. Serkan Büyükköse, Boris Vratzov, **Derya Ataç**, Jelle van der Veen, Paulo V. Santos and Wilfred G. van der Wiel “Ultrahigh-frequency surface acoustic wave transducers on ZnO/SiO₂/Si layered structure realized using nanoimprint lithography” *Nanotechnology* **2012**, *Vol. 23*, **315303** (*chosen as one of the highlights of 2012 in nanotechnology*)
(doi:10.1088/0957-4484/23/31/315303)

6. HANDS-ON LABORATORY EXPERIENCES

- Clean room experience (4 years)
- Process development (device design, choice of fabrication techniques)

- Surface and structural characterization techniques:
 - Atomic Force Microscopy (AFM), surface profiler.
 - X-ray Photoelectron Microscopy (XPS), X-ray Absorption Spectroscopy (XAS)
 - X-ray diffraction (XRD), ellipsometer.
 - Surface enhanced Raman spectroscopy (SERS)
 - Contact angle measurements

- Patterning techniques:
 - Photolithography,
 - Etching: dry etching, wet chemical etching

- Organic/ Inorganic thin film growth:
 - Thermal evaporation, electron beam evaporation, magnetron sputtering, thermal wet/dry oxidation, self-assembling monolayer formation

- Electrical characterization techniques:
 - Low temperature (sub 30mK) and room temperature current-voltage and magnetic characteristics

7. CONFERENCES AND ORGANIZATIONS ATTENDED

1. ECME 2013: European Conference on Molecular Electronics (3-7 September 2013) "Tuning the Kondo effect in thin Au films by depositing a thin layer of Au on molecular spin-dopants", Imperial Collage London, London, **United Kingdom** (poster presentation.)
2. Physics@FOM Veldhoven 2013 (22-23 January 2013) Eindhoven, **The Netherlands** (Participant)
3. Netherlands MicroNanoConference'12 (10-11 December 2012), Ede, **The Netherlands** (participant)
4. Fysica Chemie (30 May 2012), University of Twente, Enschede, **The Netherlands** (Participant)
5. Workshop Fundamentals of Nanotechnology (25-28 January 2012), Mesa+ Institute of Technology, University of Twente, Enschede, **The Netherlands**
6. Physics@FOM Veldhoven 2012 (17-18 January 2012) Eindhoven, **The Netherlands** (Participant)
7. MMM 2011: 56th Annual Conference on Magnetism & Magetic Materials (October 30th, 2011) "Tunable doping of a metal" , Scottsdale, Arizona, **USA** (oral presentation)

8. Mesa+ Meeting 2011, The Internal symposium of Mesa Plus Institute for Nanotechnology (27 September 2011), “NanoElectronics I” Enschede, **The Netherlands** (poster presentation)
9. ECME 2011: European Conference on Molecular Electronics (3-7 September 2011), 'Novel 2D spin system and its interaction with conduction electrons' Barcelona, **Spain** (Poster presentation).
10. Physics@FOM Veldhoven 2011 (18-19 January 2011) Eindhoven, **The Netherlands** (Participant)
11. MicroNano Conference (MicroNano Conference (18 November 2010) University of Twente, Enschede, **The Netherlands** (Participant)
12. Mesa+ Meeting, The Internal symposium of Mesa Plus Institute for Nanotechnology “Hybrid (Spin) Electronics” (14 September 2010) Enschede, **The Netherlands** (Poster Presentation)
13. SPINOS III, 3rd Topical Meeting on Spins in Organic Semiconductors, (30 August-3 September 2010) Amsterdam, **The Netherlands** (Participant),
14. NANOTR V: Nanoscience and Nanotechnology Conference (8-12 June 2009) “Growth and Characterization of Heavily Al Doped ZnO Thin Films by Magnetron Sputtering.” Anadolu University, Eskisehir, **Turkey** (Poster presentation)
15. Utrecht Summer School for Nanomaterials (2008), Utrecht University, **The Netherlands**
16. ISCBPU–5: V. International Student Conference of Balkan Physical Union (21-24 August 2007), “Brain Waves” Bodrum, **Turkey** (Oral presentation)
17. IV. ICOFEPS: IV. International Conference and Festival of Physics Students (31 August-3 September 2005) “Subatomic Particles and Basic Interactions” Izmir, **Turkey** (Oral presentation)

8. COMPUTER SKILLS

Microsoft Office, Origin Pro, CleWin, AutoCAD.

9. AWARDS

- Graduate fellowship, Republic of Turkey Ministry of National Education (2010) (not used).

10. REFERENCES

1. Prof. Dr. Wilfred G. van der Wiel (PhD Supervisor)
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2. Assoc. Prof. Dr. Michel P. de Jong (PhD Supervisor)
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3. Assoc. Prof. Dr. Yusuf Selamet
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* Many reference can be given on request.