

# Curriculum Vitae

## Particulars

Name: Dr. **Emil Agócs**  
Date of birth: 8. september 1984, Budapest.  
Home Address: 1171. Budapest, Nápoly u. 119.  
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## Affiliation

2015- Research fellow at Physikalisch- Technischen Bundesanstalt,  
Braunschweig  
2012- Assistant research fellow at Institute of Technical Physics and Materials  
Science, Hungarian Academy of Science, Budapest

## Education

2009-2014 University of Pannonia  
Faculty of Information Technology  
Doctoral School in Molecular and Nanotechnology  
PhD project: Optical properties of nanocrystalline and ion implanted structures  
Location: MTA MFA Fotonics Department, Ellipsometry Laboratory

2003-2009 Budapest University of Technology and Economics  
Faculty of Natural Sciences  
Materials Science Module  
Engineering Physicist  
Degree project: Production and structure analysis of CrN based thin films  
Location: MTA MFA Thin Films Department ([www.mfa.kfki.hu/eng](http://www.mfa.kfki.hu/eng))

1995-2003 Bálint Balassi Grammar School

## Experience

- Advanced application of Spectroscopic Ellipsometry
- Development of optical models
- Preparation of thin films (PVD sputter system)
- Preparation techniques for TEM (Ar-ion beam, FIB)
- Basic usage of TEM, qualitative (structural and phase analysis) and quantitative analysis (EDS, EELS)
- texture analysis (X-Ray Diffraction, TEM)

## Language skills

English intermediate level exam(2009)  
German intermediate level exam(2002)

### **Schools and conferences**

2015	SPIE Optics + Photonics, San Diego (USA)
2015	9th Workshop Ellipsometry, Enschede (Netherlands)
2014	13th. European Vacuum Conference, Aveiro (Portugal)
2013	6th. Internatioanal Spectroscopic Ellipsometry Conference, Kyoto (Japan)
2012	E-MRS Spring Meeting 2012, Strasbourg (France)
2012	7th Workshop Ellipsometry, Leipzig (Germany)
2011	EuroNanoForum, Budapest (Hungary)
2010	4th. International Conference on Micro-, Nanoelectronics, Nanotechnologies and MEMs, Athens (Greece)
2010	5th. Internatioanal Spectroscopic Ellipsometry Conference, Albany, New York (USA)
2007	Students' Scholarly Circle
2005	National Presentor Competition

### **Software**

Programming language: MATLAB, C

Other software: Maple, Origin, Microsoft Office, Photoshop.

### **Interests**

Sport: Dancing, Swimming, Climbing, Hiking

### **Participation in Projects**

2015-2018	OTKA K115852, The Hungarian Scientific Research Fund Title: Development and optical monitoring of nanostructures for sensing
2015-2016	TÉT_12_DE-1-2013-0002, Hungarian–German Intergovernmental S&T Cooperation Programme Title: Szerves vékonyrétegek alapvető paramétereinek meghatározása optikai és röntgen módszerek kombinálásával
2015-2016	TÉT_14_FR-1-2015-0041, Hungarian–French Intergovernmental S&T Cooperation Programme Title: Characterization methods of semi-conductor nanowires grown by novel electromechanical techniques
2013-2015	TÉT_12_FR-1-2013-0016, Hungarian–French Intergovernmental S&T Cooperation Programme Title: Characterization of porous materials for microelectronics
2011-2012	TÉT_10-1-2011-0754, Hungarian–French Intergovernmental S&T Cooperation Programme Title: Defect engineering controlled by low energies He implantation in Si and GaN
2010-2012	OTKA K81842, The Hungarian Scientific Research Fund Title: Protein and nanocrystalline semiconductor layers for sensors and photovoltaics.

## Publications (last five)

Mátyás Dabóczi, Emőke Albert, **Emil Agócs**, Márta Kabai-Faix, Zoltán Hórvölgyi, „Bilayered (silica-chitosan) coatings for studying dye release in aqueous media: The role of chitosan properties”, *Carbohydrate Polymers* 136 137-145, (2016)

Jayakrishnan Chandrappan, Matthew Murray, Tarun Kakkar, Peter Petrik, **Emil Agocs**, Zsolt Zolnai, D. P. Steenson, Animesh Jha, Gin Jose, „Target dependent femtosecond laser plasma implantation dynamics in enabling silica for high density erbium doping”, *Nature*, Scientific report, 5:14037, DOI: 10.1038/srep14037 (2015)

**Emil Agocs**, Bernd Bodermann, Sven Burger, Gaoliang Dai, Johannes Endres, Poul-Erik Hansen, Lars Nielsen, Morten Hannibal Madsen, Sebastian Heidenreich, Michael Krumrey, Bernd Loechel, Juergen Probst, Frank Scholze, Victor Soltwisch, Matthias Wurm, „Scatterometry reference standards to improve tool matching and traceability in lithographical nanomanufacturing”, *Proc. Of SPIE Vol. 9556 955610-1*, (2015)

Jayakrishnan Chandrappan, Matthew Murray, Péter Petrik, **Emil Agócs**, Zsolt Zolnai, Agnès Tempez, Sébastien Legendre, D P Steenson, Animesh Jha, Gin Jose, Doping silica beyond limits with laser plasma for active photonic materials, *OPTICAL MATERIALS EXPRESS* 5:(12) pp. 2849-2861. (2015)

Peter Petrik, **Emil Agocs**, Benjamin Kalas, Peter Kozma, Balint Fodor, Judit Nador, Csaba Major, Miklos Fried, „Multiple angle of incidence, spectroscopic, plasmon-enhanced, internal reflection ellipsometry for the characterization of solid-liquid interface processes”, *SPIE*, 95290W, (2015)

Further (about 20) publications on the [www.mtmt.hu](http://www.mtmt.hu) database

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