

CURRICULUM VITAE

PERSONAL DETAILS

Név: Ildikó Cora
Place and date of birth: Gyula, Hungary, 1st of Dec. 1985
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Address: Institute for Technical Physics and Materials Science, Centre for Energy Research, Hungarian Academy of Sciences, H-1121 Budapest, Konkoly-Thege M. út 29-33., Hungary

EDUCATION and WORK PLACES

2015- research fellow, HAS CER Institute for Technical Physics and Materials Science
Thin Film Physics Department
2012-2014 research assistant, Hungarian Academy of Sciences-Univ. of Miskolc Materials
Science Research group
2014 Ph.D. in Mineralogy, Earth Sciences, supervisor: Prof. István Dódony
2009 M.Sc. in Geology (spec. in Mineralogy), Eötvös Loránd University

AWARDS, SCHOLARSHIPS

2016–2017 HAS Postdoctoral Scholarship, Hungary
2012-2013 – Ányos Jedlik Predoctoral Scholarship, Hungary, 12 months
2008 – *Graduate Student Fellowship, Smithsonian Institution*, 10 week-long fellowship; Washington D.C., U.S.A.
supervisor: Jeffrey E. Post
2007/2008 and 2008/2009 – Scholarship of the Hungarian Republic
2007 – 1st place at the National Conference of Scientific Students' Associations
2006, 2008 and 2007 – „*Excellent Student of the Faculty*” award, Eötvös Loránd University

MEMBERSHIP

Member of the Hungarian Geological Society (from 2005)
Secretary of the Mineralogy and Geochemistry Section of the Hungarian Geological Society (2012-2015)
Member of the Hungarian Society for Microscopy (from 2010)
Member of the European Society for Microscopy (from 2010)
Member of the Bolyai College (between 2007-2012)

EDUCATIONAL EXPERIENCES

Between 2009 and 2013 I taught Mineralogy, Crystal Chemistry, X-ray diffraction, Diffraction Methods for geologists at Eötvös Loránd University. From 2013 to 2014 I taught thermodynamics and electron microscopy for engineers at University of Miskolc, and in 2015 crystal chemistry and crystallography for engineers at Pannon University.

RESEARCH ACTIVITY

Ildikó Cora is a research fellow at the Thin Films Department, Institute of Technical Physics and Materials Science, Centre for Energy Research, Hungarian Academy of Sciences, Budapest. She received her M.Sc. and Ph.D. in Mineralogy from Eötvös Loránd University in 2009 and 2013.

In the last 7 years she got experiences in the field of micro X-Ray diffraction and Rietveld refinement (Simthsonian Inst., NMNH, supervisor: Jeffrey E. Post) and single crystal X-ray diffraction and structure determination and refinement (HAS, RCC, supervisor: Mátyás Czugler). She applied these experiences in electron crystallography. She applied the newly developed techniques of precession electron diffraction and diffraction tomography for structure determination and refinement of submicrometer sized single crystals. She has experiences for many years in using transmission electron microscopes (Philips CM20 200kV, FEI Tecnai 200kV, JEOL3010 300kV) and image processing with simulations. She studied clay minerals, inorganic crystals like CO₃-containing apatite, ceramics, Cu-Zr-Ag alloys, semiconductor materials such as Al-, Ga-nitrides, Ga-, Zn-oxides and carbides, etc.. Now she is participating in more Hungarian, international (e.g. FLAG_ERA, JST-V4) and bilateral projects, and she is the supervisor of a Hungarian-Slovenian bilateral project from 2017 on doped ZnO thin films. Her results

were published in international (11 publ.) and Hungarian (3 publ.) journals, as well as at international conferences (7 oral and 15 poster presentations). From 2009 she has been teaching continuously

5 selected publications:

Cora, I., Mezzadri, F., Boschi, F., Bosi, M., Čaplovičová, M., Calestani, G., Dódony, I., Pécz, B. and Fornari, R. (2017) The real structure of ϵ -Ga₂O₃ and its relation to κ -phase. *Cryst. Eng. Comm.* 19, 1509–1516.

Cora, I., Pekker, P., Dódony, I., Janovszky, D. (2016): Single crystal structure determination and refinement of AgZrCu₄ and Ag-containing Cu₁₀Zr₇ by precession electron diffraction and tomography techniques. *Journal of Alloys and Compounds* 658, 678-683.

Bosi M, Attolini G, Negri M, Ferrari C, Buffagni E, Frigeri C, Calicchio M, Pécz B, Riesz F, **Cora I**, Osvath Z, Jiang L, Borionetti G. (2016): Defect structure and strain reduction of 3C-SiC/Si layers obtained with the use of a buffer layer and methyltrichlorosilane addition. *Cryst. Eng. Comm.* 18: (15), 2770-2779.

Cora, I., Dódony, I. Pekker, P. (2014): Electron crystallographic study of a kaolinite single crystal. *Applied Clay Science* 90, 6-10.

Cora, I., Czugler, M., Dódony, I., Recnik, A. (2011): On the symmetry of wulfenite (Pb[MoO₄]) from Mezica (Slovenia). *Acta Cryst.* C67, i33-i35.
and *Absolute structure special issue, Acta Cryst.* C, 2012. December (*open access*)