

Complete list of publications for C. N. Borca:

Book chapters:

Magnetic and electronic structure modifications induced by surface segregation in $\text{La}_{0.65}\text{Pb}_{0.35}\text{MnO}_3$ thin films

C.N. Borca, Hae-Kyung Jeong and Takashi Komesu

Magnetic properties of solids, Editor Kenneth B. Tamayo, ISBN 978-1-60741-550-3 (2008)
Nova Science Publishers, Inc.

Processing and properties of thin manganite films

S. Canulescu, C.N. Borca, M. Döbeli, P. Schaaf, T. Lippert and A. Wokaun

Magnetic properties of solids, Editor Kenneth B. Tamayo, ISBN 978-1-60741-550-3 (2008)
Nova Science Publishers, Inc.

Surface Segregation and Compositional Instability at the Surface of the Half Metallic Ferromagnets and Related Compounds

Hae-Kyung Jeong, A.N. Caruso, C.N. Borca

Half-metallic Alloys - Fundamentals and Applications, Springer Series: Lecture Notes in Physics, Vol. 676, pages 221-236 (2005), Edited by I. Galanakis and Peter Heinz Dederichs (ISBN: 3-540-27719-6)

The Possible Influence of Magnetic Ordering on Segregation in Ternary Alloys: TiCoSb and NiMnSb

A.N. Caruso and C.N. Borca

Recent Research Developments in Magnetism and Magnetic Materials, Vol.1, pages 33-48 (2003), Published by Transworld Research Network 37/661(2), Fort P.O., Trivandrum – 695 023 Kerala, India (ISBN 81-7895-100-2)

Peer-reviewed journal articles:

Selenium redox speciation and coordination in high-burnup UO_2 fuel: Consequences for the release of ^{79}Se in a deep underground repository,

Enzo Curti, Annick Froideval-Zumbiehl, Ines Günther-Leopold, Matthias Martin, Andrej Bullemer, Hanspeter Linder, Camelia N. Borca, Daniel Grolimund,
Journal of Nuclear Materials, DOI: 10.1016/j.jnucmat.2014.07.003 (2014)

Local atomic structure of chromium bearing precipitates in chromia doped uranium dioxide investigated by combined micro-beam X-ray diffraction and absorption spectroscopy,

G. Kuri, C. Mieszczyński, M. Martin, J. Bertsch, C.N. Borca, Ch. Delafoy,
Journal of Nuclear Materials 449 158-167 (2014)

Band gap structure modification of amorphous anodic Al oxide film by Ti-alloying

S. Canulescu, K. Rechendorff, C.N. Borca, N.C. Jones, K. Bordo, J. Schou, Nielsen Pleth L., S.V. Hoffmann, R. Ambat,
Applied Physics Letters 104 121910-4 (2014)

Microanalytical X-ray Imaging of Depleted Uranium Speciation in Environmentally Aged Munitions Residues

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Anisotropic diffusion at the field scale in a 4-year multi-tracer diffusion and retention experiment - I: Insights from the experimental data

Thomas Gimmi, Olivier Leupin, Jost Eikenberg, M.A. Glaus, L. van Loon, H.N. Waber, P. Wersin, HAO Wang, D. Grolimund, C.N. Borca, S. Denwock, C. Wittebroot
Geochimica et Cosmochimica Acta 125 373-393 (2014)

Irradiation effects and micro-structural changes in large grain uranium dioxide fuel investigated by micro-beam X-ray diffraction

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D. Welipitiya, C.N. Borca, C. Waldfried, C. Hutchins, L. Sage, C.M. Woodbridge, P.A. Dowben
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Journal of Physics: Conference Series 186, 012078 (2009)

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Optical Two-dimensional Fourier-Transform Spectroscopy of Semiconductor Quantum Wells

C.N. Borca, Tianhao Zhang, S.T. Cundiff

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Two-dimensional Fourier Transform Optical Spectroscopy of GaAs Quantum Wells

C.N. Borca, T. Zhang, S.T. Cundiff

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A Surface Insulator-to-Conductor Phase Transition in Colossal Magnetoresistive Manganese Perovskites Thin Films

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Mechanisms of Surface and Microstructure Evolution in Deposited Films and Film Structures - Edited by J. Sanchez Jr., J.G. Amar, R. Murty, G. Gilmer - MRS Symposium Proceedings 672, O9.8.1-5 (2001)

Selective Area Chemical Vapor Deposition of Chromium Oxides

Ruihua Cheng, C.N. Borca and P.A. Dowben

Magnetic Materials, Structures and Processing for Information Storage - Edited by Brian J. Daniels, Michael A. Seigler, Tom P. Nolan, Shane Wang, and Christopher B. Murray - MRS Symposium Proceedings 614, F10.4.1-6 (2000)

ESR Investigations on Ca-Perovskites

M.I. Chipara, Sy-Hwang Liou, C.N. Borca, R. Shoemaker, S. Adenwalla and P.A. Dowben,
Magnetic Materials, Structures and Processing for Information Storage - Edited by Brian J. Daniels, Michael A. Seigler, Tom P. Nolan, Shane Wang, and Christopher B. Murray, MRS Symposium Proceedings 614, F8.11.1-6 (2000)

Growth and Magnetic Properties of $La_{0.65}Pb_{0.35}MnO_3$ Films

Q.L. Xu, M.T. Liu, Y. Liu, C.N. Borca, H. Dulli, P.A. Dowben and S.-H. Liou

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Is Magnetic Circular Dichroism Surface Sensitive in the Manganese Perovskites?

C.N. Borca, R.H. Cheng, Shane Stadler, Y.U. Idzerda, J. Choi, D.N. McIlroy, Q.L. Xu, S.H. Liou, Z.C. Zhong, P.A. Dowben

Magnetoresistive Oxides and Related Materials, Edited by M. Rzchowski, M. Kawasaki, A.J. Millis, M. Rajeswari, S. von Molnar - MRS Symposium Proceedings 602, 301-306 (2000)

The Influence of Patterning in Co and Co/Pd Multilayers Structures

C.N. Borca, Rui-Hua Cheng, and P.A. Dowben

Polycrystalline Metal and Magnetic Thin Films - Edited by D. Laughlin, K.P. Rodbell, O. Thomas, B. Zhang, MRS Symposium Proceedings 562, 63-67 (1999)

Fabrication of Micron Scale Magnetic Nickel Features by Selective Organometallic Chemical Vapor Deposition

D. Welipitiya, C.N. Borca, P.A. Dowben, I. Gobulukoglu, Hong Jiang, B.W. Robertson, and Jiandi Zhang

Magnetic Ultrathin Films, Edited by J. Tobin, D. Chambliss, D. Kubinski, K. Barmak, P. Dederichs, W. de Jonge, T. Katayama, A. Schuhl, Multilayers and Surfaces - MRS Symposium Proceedings 475, 257-262 (1997)

The Influence of Topology on Magnetism

C.N. Borca, D. Welipitiya, S. Adenwalla, P.A. Dowben

Physics of Low-Dimensional Structures 12, 173-178 (1997)

Personal conference and workshop attendance with active contribution:

Invited lectures:

Swiss Institute for Art Research, Zurich (Switzerland), 21 February 2011

Paint layers analysis by synchrotron based XRF and XRD

University of Fribourg, Physics Department, Fribourg (Switzerland), 30 January 2009

Analysis of the electronic configuration in manganite thin films using X-ray absorption spectroscopy

7th International Conference on Transparent Optical Networks – ICTON, Barcelona, Spain, July 3-7 2005

Perspectives of rare-earth ion doped crystals waveguide lasers and amplifiers

Microscopy and Microanalysis Conference, Quebec City, Canada, August 5-8 2002

Exploring Surfaces of Pb-doped Manganese Perovskites

Laboratoire Louis Néel, CNRS Grenoble (France), 25 September 2001

Surfaces of Half-Metals

Contributed papers:

2014

European Materials Research Society – EMRS, Lille (France) May 26 - 30 2014

Contributor to oral presentations: *Structural investigation of phase change memory stacked films* and *Phase Dynamics and Sub-Micrometric Properties of Complex Uranium Compounds*

2013

European Materials Research Society – EMRS, Strasbourg (France) May 26 - 31 2013

Contributor to oral presentations: *Selenium speciation in a spent UO₂ fuel and in non-irradiated UO₂ reference samples: a synchrotron-based (micro-)XRF / XAS feasibility study* and *X-ray absorption in plutonium uranium mixed oxide fuel: thorium characterization*

2012

European Materials Research Society – EMRS, Strasbourg (France) May 14 - 18 2012

Contributor to oral presentation: *Radiation induced structural and magnetic changes in Fe-Cr alloys*

2011

European Materials Research Society – EMRS, Nice (France) May 9 - 13 2011

Oral presentation: *The influence of Cr-composition on the local atomic and magnetic structure of FeCr alloys*

Joint annual meeting SPS - APS, Lausanne (Switzerland) 15-17 June 2011

Poster presentation: *Investigating the structure of Fe-Cr alloys using synchrotron based X-ray microanalysis*

Joint User Meeting @ PSI - JUM@P'11, PSI Villigen (Switzerland), Sept 15-16 2011

Poster presentation: *Study of radiation-induced modifications in Fe-Cr alloys using grazing incidence X-ray spectroscopy*

2010

European Materials Research Society – EMRS, Strasbourg (France), June 7 - 11 2010

Oral presentation: *Investigating the structure of Fe-Cr alloys using synchrotron based X-ray microanalysis*

Materials Modelling in Nuclear Energy Environments: State of the Art and Beyond, CECAM-ETHZ, Zurich (Switzerland), April 26-29 2010

Poster presentation: *EXAFS investigations on moderately doped Fe-Cr alloys for model validation*

2009

8th Summer School on Functional Materials, Zuz (Switzerland), Aug 1-5 2009

Poster presentation: *XAS investigations at the Mn and Nb K-edges of the $\text{MnO}_x\text{-NbO}_x\text{-CeO}_2$ catalyst*

Joint User Meeting @ PSI - JUM@P'09, PSI Villigen (Switzerland), Oct 12-13 2009

Poster presentation: *Investigating the structure of Fe-Cr alloys for model validation using synchrotron based X-ray microanalysis techniques*

Electron Microscopy and Multiscale Modelling EMMM 09, Zurich (Switzerland), Oct 27-30 2009

Oral presentation: *Investigating the structure of Fe-Cr alloys for model validation using synchrotron based X-ray microanalysis techniques*

2008

X-ray Microscopy Conference, Zurich (Switzerland), July 21-25 2008

Poster presentation: *The micro-XAS beamline: a multi-technique hard X-ray microprobe station at the Swiss Light Source*

2007

European Materials Research Society – EMRS, Strasbourg (France), May 27 – June 1 2007

Oral presentation: *Analysis of the Electronic Configuration of the Pulsed Laser Deposited $\text{La}_{0.7}\text{Ca}_{0.3}\text{MnO}_3$ thin films*

6th Summer School on Correlated Electron Materials, Zuz (Switzerland), Aug 18-25 2007

Poster presentation: *Electronic configuration of the pulsed laser deposited $\text{La}_{0.7}\text{Ca}_{0.3}\text{Mn}_{0.8}\text{Fe}_{0.2}\text{O}_3$ thin films*

2006

European Materials Research Society – EMRS, Nice (France), May 29 – June 2 2006

Oral presentation: *Buried channel waveguides in Yb-doped KYW crystals fabricated by femtosecond-irradiation*

15th International laser physics Workshop – LPHYS, Lausanne (Switzerland), July 24-28, 2006

Oral presentation: *Focused ion beam nano-structured rib waveguides on KY(WO₄)₂ for laser applications*

Annual Meeting of the Swiss Physical Society, EPF Lausanne (Switzerland), February 13-14, 2006

Poster Presentation: *Optical Channel Waveguides in KY(WO₄)₂:Yb³⁺*

2005

European Materials Research Society – EMRS, Strasbourg (France), May 31 – June 3 2005

Oral presentation: *Fabrication of optical planar and channel waveguides in Yb³⁺ doped KY(WO₄)₂ by He-ion implantation*

Conference on Lasers and Electro-Optics / European Quantum Electronics Conference – CLEO Europe EQEC, Munich (Germany), June 12-17 2005

Oral presentation: *Fabrication of optical planar waveguides in KY(WO₄)₂ by He ion implantation*

2004

Photonics West – OPTO 2004, Ultrafast Phenomena in Semiconductors and Nanostructure Materials VIII, San Jose CA (U.S.A.), Jan 24-29 2004

Oral presentation: *Two-dimensional Fourier transform optical spectroscopy of GaAs quantum wells structures*

2003

American Physical Society – March Meeting, Austin TX (U.S.A.), March 3-7 2003

Oral presentation: *Measurement of LH-HH Exciton Raman Coherence Using Three-Beam Transient Four-Wave Mixing*

2001

61st Annual Physical Electronics Conference, Taos NM (U.S.A.), June 11-13 2001

Oral presentation for Nottingham prize competition: *Evidence for Temperature Dependent Magnetic Moment Ordering in Ferromagnetic NiMnSb(100) Thin Films*

EuroConference on Computer Simulation of Complex Interfaces: Out of the vacuum, Into the Real World – Electronic Structure of Solids and Surfaces, Gien (France), September 7-12 2001

Poster presentation: *Surfaces of Half-Metals*

2000

American Physical Society – March Meeting, Minneapolis MN (U.S.A.), March 20-24 2000

Oral presentation: *Evidence of a Surface Phase Transitions in La_{0.65}Pb_{0.35}MnO₃ Thin Films*

47th International Symposium of the American Vacuum Society, Boston MA (U.S.A.), October 2-6 2000

Oral presentation: *Magnetic Dichroism in the Soft X-ray Absorption Region of NiMnSb Ferromagnetic Alloy*

International Conference on Solid Films and Surfaces ICSFS-10, Princeton NJ (U.S.A.), July 9-13 2000

Poster presentation: *Phase Transitions in Two-Dimensional Ferroelectric Films*

2001 Spring Meeting of the Material Research Society, San Francisco CA (U.S.A.), April 16-20 2001

Oral presentation: *Tailoring Manganese Perovskite Surfaces*

1999

American Physical Society – Centennial Meeting, Atlanta GA (U.S.A.), March 20-26 1999

Oral presentation: *Influence of Dynamical Scattering in Crystalline Poly(Vinylidene Fluoride-Trifluoroethylene) Copolymers*

Spring Meeting of the Material Research Society, San Francisco CA (U.S.A.), April 5-9 1999

Oral presentation: *Micromagnetic Model of Patterned Soft Magnetic Structures*

Oral presentation: *The Influence of Patterning on Co and Co/Pd Multilayers Structures*

46th International Symposium of the American Vacuum Society, Seattle WA (U.S.A.), October 25-29 1999

Oral presentation: *Phase Transitions in Two-Dimensional Ferroelectric Films*

44th Annual Conference in Magnetism and Magnetic Materials, San Jose CA (U.S.A.), November 15-18 1999

Oral presentation: *Surface Phases in Perovskite Thin Films*

Oral presentation: *The Magnetic Properties of the Lead Manganese Perovskite: (La, Pb) MnO₃*

1998

American Physical Society, Los Angeles CA (U.S.A.), March 15-20 1998

Oral presentation: *Fabrication and Characterization of Micron Scale Magnetic Features*

45th International Symposium of the American Vacuum Society, Baltimore MD (U.S.A.), November 2-6 1998

Oral presentation: *Fabrication and Characterization of Micron Scale Magnetic Features*

3rd International Symposium on Metallic Multilayers held jointly with the European Material Research Society Symposium on Magnetic Ultrathin Films and Ultrathin Nanostructures, Vancouver BC (U.S.A.), June 14-19, 1998

Oral presentation: *Fabrication and Characterization of Micron Scale Magnetic Features*

1997

Nebraska Academy of Sciences Inc., Lincoln NE (U.S.A.), April 25-26 1997

Oral presentation: *Micron-Scale Magnetic Nickel Features*

10th International Conference on Superlattices, Microstructures and Microdevices, Lincoln NE (U.S.A.), July 8-11 1997

Oral presentation: *The Influence of Topology on Magnetism*

45th Midwest Solid State Conference, Manhattan KS (U.S.A.), October 3-4 1997

Oral presentation: *Fabrication of Micron Scale Magnetic Nickel Features by Selective Area Organometallic Chemical Vapor Deposition*