

Program

Sunday, 22 April 2012

17:00 – 21:00 Registration

from 18:30 *WELCOME BUFFET / Informal get together*

Monday, 23 April 2012

7:00 *BREAKFAST*

8:30 – 8:45 Manuel Angst

Welcome and introduction

8:45 – 9:00 Ernst Dreisigacker

About the Wilhelm and Else Heraeus Foundation

09:00 – 09:45 Tsuyoshi Kimura

Magnetoelectric effect in an XY-like spin glass system

Model Hamiltonians:

09:45 – 10:20 Daniel Khomskii

Coupled electric and magnetic effects in frustrated mott insulators: spontaneous currents, dipoles and monopoles

10:20 – 10:45 *COFFEE BREAK*

10:45 – 11:20 Maxim Mostovoy

Landau theory of topological defects in hexagonal manganites

11:20 – 11:55 Jeroen van den Brink

Multiferroicity due to charge ordering

11:55 – 12:00 **Conference Photo** (in front of the Physikzentrum)

12:00 – 13:30 *LUNCH*

Program

Monday, 23 April 2012

Electromagnons

- 13:30 – 14:05 Alexey Shuvaev **Systematics of electromagnons in rare-earth manganites**
- 14:05 – 14:25 Jaime Fernandez-Baca **Long-range magnetic interactions in the multiferroic antiferromagnet MnWO₄**
- 14:25 – 15:00 Markus Braden **Neutron scattering studies on chiral multiferroics**
- 15:00 - 15:20 Christelle Kadlec **Magnon and possible electromagnon in paraelectric ferrimagnet ϵ -Fe₂O₃**
- 15:30 – 16:00 *COFFEE BREAK*

Magnetic and crystal structure I

- 16:00 – 16:35 Helen Walker **Probing magnetoelectric multiferroics using circularly polarized x-ray scattering**
- 16:35 – 17:10 Peter Hatton **What can resonant soft x-ray diffraction tell us about multiferroics?**
- 17:10 – 17:25 *SHORT BREAK*
- 17:25 - 18:00 Michel Viret **Electric field and light effects in multiferroic BiFeO₃**
- 18:00 – 18:35 Michel Kenzelmann **A new route towards a ferromagnetic ferroelectric**
- 18:35 – 19:10 Alessandro Bombardi **Recent results from x-ray scattering on multiferroic materials**
- 19:30 CONFERENCE DINNER
Followed by a social evening on invitation of the Wilhelm and Else Heraeus Foundation in the Physikzentrum

Program

Tuesday, 24 April 2012

08:00 *BREAKFAST*

New multiferroic materials

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|---------------|--------------------------|--|
| 09:00 – 09:35 | Shintaro Ishiwata | Multiferroicity out of spin helix |
| 09:35 – 10:10 | Dharmalingam Prabhakaran | Crystal growth of multiferroic materials |
| 10:10 – 10:30 | José Luis Garcia-Munoz | Magnetic order and magnetoelectric properties of single crystal Mn_{0.9}Co_{0.1}WO₄ multiferroic |
| 10:30 – 11:00 | <i>COFFEE BREAK</i> | |
| 11:00 – 11:35 | Joost de Groot | Charge and spin order in the candidate multiferroic material LuFe₂O₄ |
| 11:35 – 11:55 | Alexandros Lappas | Hydrogen-bond ordering mediated multiferroicity in hybrid organic-inorganic perovskites |
| 12:00 – 13:30 | <i>LUNCH</i> | |

Program

Tuesday, 24 April 2012

Dielectric properties

- 13:30 – 14:05 Alois Loidl **New routes to multiferroics**
- 14:05 – 14:40 Manfred Fiebig **Interplay between trimerization, ferroelectric and magnetic order in the hexagonal manganites**
- 14:40 – 15:00 Stanislav Kamba **Search for new strain-induced multiferroics**
- 15:00 – 15:30 *COFFEE BREAK*

Magnetic and crystal structure II

- 15:30 – 16:05 Urs Staub **Magnetic and electronic structure probed by resonant soft x-diffraction in the RMnO_3 family**
- 16:05 – 16:40 Jorge Enrique Hamann Borrero **Magnetic structure of magneto-electric $\text{NdFe}_3(\text{BO}_3)_4$ under applied magnetic and electric fields: A resonant magnetic x-ray scattering study**
- 16:40 – 17:00 Vladimir Hutanu **Crystal and magnetic structure of multiferroic $\text{Ba}_2\text{CoGe}_2\text{O}_7$**
- 17:00 – 17:35 Enrico Schierle **Magnetic cycloids and ferroelectric domains probed and manipulated by soft x-rays**
- 17:35 – 17:45 *SHORT BREAK*
- 17:45 – 19:30 Poster Session
- 19:30 *DINNER*

Program

Wednesday, 25 April 2012

08:00 *BREAKFAST*

Density Functional Theory

09:00 – 09:35 Nicola Spaldin **Revisiting the hexagonal manganites**

09:35 – 09:55 Martin Schlipf **Ab initio prediction of multiferroicity in PbCrO_3**

09:55 – 10:30 Alessandro Stroppa **Multiferroicity and magnetoelectricity in a metal-organic framework**

10:30 – 11:00 *COFFEE BREAK*

Thin films: Towards Applications

11:00 – 11:35 Manuel Bibes **Tuning ferroelectricity and magnetism by epitaxial strain in BiFeO_3 thin films**

11:35 – 12:10 Karin Dörr **Directly probing the effect of strain on magnetic exchange interactions**

12:10 – 13:30 *LUNCH*

13:30 – approx. 15:00 Panel and all participants **Final discussion: 'Quo Vadis muliferroics?'**

End of the seminar and departure