

## Degrees

Secondary education, Science-Greek, Collège St Remacle Stavelot, June 1991

B.S. in Physics, *magna cum laude*, Université de Liège, June 1995

B.A. in Philosophy, *summa cum laude*, Université de Liège, June 1998

Agrégation à l'enseignement secondaire supérieur, *magna cum laude*, Université de Liège, June 1999

Ph. D. in Physics, *summa cum laude* with official congratulations of the examination jury,  
Université de Liège, June 2004

## Languages

Native languages: French and German

Other languages: completely fluent in English, good level of spoken Dutch

## Undergraduate Theses

Mémoire présenté pour l'obtention du titre de licencié en Sciences Physiques (presented to the Science Faculty for a Diploma in Physics), **Le concept de temps en Physique (The Concept of Time in Physics)**, *Université de Liège*, June 1995.

Mémoire présenté pour l'obtention du titre de licencié en Philosophie (presented to the Faculty of Philosophy for a Diploma in Philosophy), **Elaboration aristotélicienne du concept de temps (The Aristotelian Elaboration of the Concept of Time)**, *Université de Liège*, June 1998.

## Graduate Ph. D. Thesis

**A Neutron Scattering and Mössbauer Spectral Study of Thermoelectric and Magnetic Materials**,  
*Université de Liège*, June 2004.

## Research Interests

Solid state physics and material science; lattice dynamics.

Specialties: inelastic scattering of neutrons and x-rays, Mössbauer spectroscopy, resonant ultrasound spectroscopy

## Professional Experience

**Currently** Researcher (2015-2020) – Senior Researcher (2021-present)  
Materials Science and Technology Division, *Oak Ridge National Laboratory*  
Principal Investigator for Neutron Scattering Studies of Hybrid Excitations  
(2018-present)

Scientist, *Forschungszentrum Jülich*

April 2012-May 2015.

Tenure review committee: Dr. Gopal Shenoy, Argonne National Laboratory, Prof. Peter Rogl, U Vienna, Prof. Werner Press, U Kiel

Invited Professor, Faculty of Science, *Université de Liège*

September 2009- August 2015.

Helmholtz Young Investigator Group Leaders, *Forschungszentrum Jülich*

July 2008 to June 2014

Scientist, Institute for Solid State Research, *Forschungszentrum Jülich*

September 2006 to June 2008

Postdoctoral Research Assistant, Département de Physique, *Université de Liège*,

October 2005 to August 2006

Postdoctoral Research Scholar, Department of Materials Science & Engineering, *The University of Tennessee, Knoxville*

July 2004 to October 2005

Graduate Research Assistant, Département de Physique, *Université de Liège*,

October 1999 to June 2004

Adult Education Teacher, “*System Theory*” and “*Systems and Crisis*” lectures in the  
“Systemic intervention for social workers” post graduate degree

Centre de Promotion Sociale pour Educateurs, *Robermont*, October 1999 to June 2003

Graduate Research Assistant, Service de Pédagogie Expérimentale, *Université de Liège*,

March 1998 to July 1999

## Professional Advancement

Research Assistant, Programme Tournesol, *Observatoire de Paris-Meudon, France*, with Dr. L. Nottale,  
Directeur de Recherche au CNRS, September 1994, April 1995, February 1996

Small Body Dynamics in the Solar System, *NATO Advanced Study Institute, Maratea, Italy*, July 1997

XANES Spectroscopy Training, *Université de Paris-Sud, France*, September 2000

Neutron Scattering Laboratory Course, *Forschungszentrum Jülich, Germany*, September 2001

Resonant Ultrasound Spectroscopy Training, *Los Alamos National Laboratory*,

October 31<sup>st</sup>-November 4<sup>th</sup> 2005

More than 100 research proposals carried out at major large scale facilities, including:

- Neutron Scattering: FRJ-II, ILL, FRM-II, SINQ-PSI, SNS-ORNL, HFIR-ORNL
- Synchrotron Radiation: LURE, ESRF, SLS-PSI, APS, DORIS, PETRA-III, SOLEIL
- Muon Spin Rotation: PSI, TRIUMF

Training in Efficient Management, *Helmholtz Association and Malik Management Centre*, Berlin, February and October 2009

US representative to the International Board for the Applications of the Mössbauer Effect (IBAME)  
(2018-2020;2020-2026)

Technical Program Officer, Physical Acoustics, Acoustical Society of America (2022-)

**Professional societies, member:** American Physical Society, Materials Research Society, Acoustical Society of America, American Association for the Advancement of Science

## University teaching experience

Master in chemistry, “*Large scale facilities for materials characterization*”, 3 ECTS, Univ. Liège, 2012-2015  
Master in physics and EU - FAME, “*Magnetism and nanomagnetism*”, 3 ECTS, Univ. Liège, 2009-2012  
Lecturer in various IFF Spring Schools and JCNS Neutron Scattering Schools, Jülich, 2008-2012  
Occasional lecturer in the “*Physics for Civil Engineers*” bachelor course, RWTH Aachen, 2006 and the “*Solid State Physics I and II*” master course, RWTH Aachen, 2007-2009 (Prof. Th. Brückel)  
Science teacher education course, *part. “Epistemology of science”*, Univ. Liège, 2004 and 2006  
Exercise sessions for B. Sc. and Engineering students, “*General Physics*”, Univ. Liège, 1999-2004, 2006  
Laboratory course, Master in physics, *Mössbauer spectroscopy*, 6 h/year, Univ. Liège, 2001-2003, 2006  
Laboratory course, Bachelor in engineering, “*General Physics*”, *ca.* 50 h/year, Univ. Liège, 1999-2004, 2006

## Bachelor students

Mr. T. Könen (2013) “*Construction of a high precision dilatometer*”  
Mai 2013, B.Sc. Physical engineering, Dept. energy technologies, Fachhochschule Aachen at Jülich.  
Co-advisor: Prof. F.M. Rateike.  
Mr. W. Röhrig (2013) “*Investigation of Europium Zirconates using Mössbauer spectroscopy*”  
August 2013, RWTH Aachen University. Co-advisor: Prof. M. Angst.

## Diploma / M.Sc. students

Mr. J. Gallus (2010-2011) “*Lattice Dynamics in the SnSb<sub>2</sub>Te<sub>4</sub> Phase Change Material*”  
October 2011, RWTH Aachen University. Co-advisor: Prof. M. Wuttig.  
Miss H. Williamson (2011-2012) “*Magnetic and Charge Order in LuFe<sub>2</sub>O<sub>4</sub> and YbFe<sub>2</sub>O<sub>4</sub> multiferroics*”  
November 2012, U. Loughboro. Advisor: Prof. G. Balakrishnan. Co-supervisor: Prof. M. Angst.  
Miss F. Deng (2014) “*Investigation of fatigue cracks in VHCF steel with small angle neutron scattering*”  
April-October 2014. RWTH Aachen University. Co-advisor: Prof. Th Brückel.

## Graduate students

Thesis supervisor:

Dr. Sabrina Disch (2007-2010) “*The spin structure of magnetic nanoparticles and in magnetic nanostructures*”  
August 2010, Forschungszentrum Jülich / RWTH Aachen University. Advisor: Prof. Th. Brückel.

Thesis advisor:

Dr. A. Möchel (2008-2011) “*Lattice dynamics in thermoelectric Zintl phases*”  
May 2011, Forschungszentrum Jülich / Univ. Liège.  
Dr. D. Bessas (2009-2012) “*Structure and Lattice Dynamics of Bismuth Telluride Nanostructures*”  
September 2012, Forschungszentrum Jülich / Univ. Liège.  
Dr. P. Bauer Pereira (2009-2012) “*Structure and Lattice Dynamics of Thermoelectric Complex Chalcogenides*”  
October 2012, Forschungszentrum Jülich / Univ. Liège.  
Dr. T. Claudio Weber (2008-2013) “*Lattice Dynamics of Nanostructured Thermoelectric Materials*”  
March 2013, Forschungszentrum Jülich / Univ. Liège.  
Dr. M. Herlitschke (2011-2014) “*Lattice dynamics and magnetic properties in selected functional iron compounds*”  
January 2015, Forschungszentrum Jülich / Univ. Liège.  
Dr. R. Simon (2011-2014) “*Lattice dynamics in antimony & tellurium based phase change materials*”  
April 2015, Forschungszentrum Jülich / Univ. Liège.  
Dr. A. Jafari (2013-2016) “*Sapphire ultraoptics for sub-meV <sup>121</sup>Sb and <sup>125</sup>Te phonon spectroscopy*”  
December 2016, Forschungszentrum Jülich / Univ. Liège.

Dr. P. Alexeev (2013-2017) “*Nuclear Resonance Scattering Study of Iridates, Iridium and Antimony Based Pyrochlores*” May 2017,  
Forschungszentrum Jülich / U. Hamburg. Co-Advisor: Ralf Röhlsberger, DESY Hamburg.

### **Postdoctoral supervisor**

Dr. Benedikt Klobes, Forschungszentrum Jülich, (2011-2015).  
Dr. Abdelfattah Mahmoud, Forschungszentrum Jülich, (2013-2015).  
Dr. Vasily Potapkin, Forschungszentrum Jülich, (2013-2015).  
Dr. Junjie Zhang, Oak Ridge National Laboratory, (2017-2019).  
Dr. James Torres, Oak Ridge National Laboratory, (2019-2022).  
Dr. Duncan Moseley, Oak Ridge National Laboratory, (2019-present).  
Dr. George Yumnam, Oak Ridge National Laboratory, (2022-present).

### **Intern program - Mentor**

Anirhudda Pawaskar, U. Columbia, GO! HERE, (2017).  
Markus Herrmann, FZ Juelich, (2017).  
Erich von Geiss, Chatham University, HERE, (2018-2019).  
Amalie Atassi (2019), Juanita Hidalgo, (2021). GEM Fellowship.  
Riley Hanus (2019), Huu Nguyen (2022), DOE SCGSR.

## Funded Research projects

1. “*Lattice Dynamics in Emerging Functional Materials*”  
Funding Agency: Helmholtz Association, Germany  
Funding Type: Young Investigator Group  
Funding: ~1500 k€/ 72 months  
Duration: July 2008-June 2014  
Promotor: R. P. Hermann
2. “*Nanostructures, excitations and thermoelectric properties in Bi<sub>2</sub>Te<sub>3</sub> nanomaterials*”  
Funding Agency: Deutsche Forschungsgemeinschaft, Germany  
Funding Type: Priority Program “Nanostrukturierte Thermoelektrika” of the German Research Society  
Program duration: 2009-2015.  
*R. P. Hermann was member of the submission board of the priority program.*  
Total funding ~12000 k€/6 years. 16 projects funded in the first period 2009-2012.  
Funding: ~800 k€ (160 k€ R. H.)/ 36 months  
Period: May 2009-April 2012  
Promotors: O. Eibl (U. Tübingen), R. P. Hermann, K. Nielsch (U. Hamburg), H. Böttner (FhG IPM Freiburg), J. Schmidt (FhG IFAM Dresden), C. Elsässer (FhG IWM Freiburg)  
  
In this framework, participation without specific funding (funding is included in the above project) in two other projects within the same period:  
  - “*Silicon and germanium nanocomposites for thermoelectric applications*”  
Funding: ~650 k€/ 36 months  
Promotors: H. Wiggers, G. Schierning, R. Schmechel (U. Duisburg-Essen), M. Brandt, M. Stutzman (T. U. München), D. Wolf ( U. Duisburg-Essen), R. P. Hermann
  - “*Thermoelectric properties of binary & quasi-ternary intermetallics*”  
Funding: ~310 k€/ 36 months  
Promotors: W. Tremel (U. Mainz), J. Schmidt (FhG Dresden), R. P. Hermann
3. “*Self organized nanostructures in complex chalcogenides*”  
Funding Agency: Bundesministerium für Bildung und Forschung, Germany (BMBF)  
Funding Type: Priority Program on Thermoelectric Materials  
Funding: ~1100 k€ (~270 k€, R. H.)/ 30 months  
Period: August 2009-January 2012.  
Promotors: E. Müller (DLR Köln), A. Neubrand (FhG Freiburg), R. P. Hermann, T. Höche (Leibniz. I. Leipzig)
4. “*Nanoswitches*”, *RWTH Aachen University and Forschungszentrum Jülich GmbH*  
Project A5: “Vibrational Properties and the Role of Temperature”, R.D. Dronskowski, R. P. Hermann  
Funding Agency: German Research Society (DFG)  
Funding Type: Collaborative research center (SFB)  
Funding: ~8000 k€ (~160 k€, R. H.)/ 48 months  
Period: Juli 2011-June 2015.  
Coordinator: M. Wuttig (RWTH Aachen University)

5. *“Dimensionality, nanostructure, excitations and thermoelectric properties of Bi<sub>2</sub>Te<sub>3</sub> and CoSb<sub>3</sub> based nanomaterials”*  
 Funding Agency: Deutsche Forschungsgemeinschaft, Germany  
 Funding Type: Priority Program “Nanostrukturierte Thermoelektrika” of the German Research Society  
 Program duration: 2009-2015. Prolongation of project 2.  
 Funding: ~900 k€ (150 k€ R. H.)/ 36 months  
 Period: November 2012-October 2015  
 Promotors: O. Eibl (U. Tübingen), R. P. Hermann, K. Nielsch (U. Hamburg), M. Albrecht (U Chemnitz), V. Pacheco (FhG IFAM Dresden), C. Elsässer (FhG IWM Freiburg)  
 In this framework, participation with complementary funding in one other projects within the same period:  
 - *“Thermoelectric properties of binary & quasi-ternary intermettals”*  
 Funding: ~150 k€/ 36 months (5 k€ R.H.)  
 Promotors: W. Tremel (U. Mainz), Yu. Grin (MPI-CPs Dresden), R. P. Hermann
6. *“Sapphire Ultraoptics for Synchrotron Radiation”*  
 Funding Agency: Helmholtz Gemeinschaft Deutscher Forschungszentren and Russian Foundation for Basic Research  
 Funding Type: Helmholtz-Russia Joint Research Group  
 Funding: ~465 k€ / 36 months  
 Period: February 2013-January 2016  
 Promotors: R. P. Hermann – Coordinator,  
 V. Asadchikov (Inst. for Cristallography, Moscow), A. Vasilyevich (Rokor Ltd., Moscow), H.-C. Wille (DESY Hamburg), S. Stankov (KIT Karlsruhe), R. Ruffer (ESRF, Grenoble).
7. *“Magnetism in nickel compounds under high pressure”*  
 Funding Agency: Helmholtz Gemeinschaft Deutscher Forschungszentren  
 Funding Type: Helmholtz Postdoctoral Fellowship Program  
 Funding: ~200 k€ / 24 months  
 Period: April 2013-March 2015  
 Applicant: Vasily Potapkin  
 Host: R. P. Hermann
8. *“Adiabatic demagnetization cooling with molecular magnets”*  
 Funding Agency: Jülich Aachen Research Alliance  
 Funding Type: JARA Seed Funds – RWTH 2020  
 Funding: ~44 k€ / 12 months  
 Period: 2013  
 Promotors: R. Temirov, R. P. Hermann, P. Kögerler
9. *“Electrochemically active materials characterization by nuclear resonance and neutron scattering techniques”*  
 Funding Agency: Forschungszentrum Jülich GmbH  
 Funding Type: Jülich International Postdoc Program  
 Funding: ~70 k€ / 24 months  
 Period: August 2013-August 2015  
 Recipient: Abdelfattah Mahmoud – Collaboration with U. Stockholm, U. Montpellier, and U. Marrakech  
 Host: R. P. Hermann
10. Industrial contract with confidentiality agreement: Umicore group (2012), OpenGrid Europe (2013).

11. *“Impact of Dynamic Instabilities and Microstructure on Energy Materials”*  
Funding Agency: US Department of Energy, Basic Energy Sciences  
Funding Type: Field Work Program  
Funding: ~1600 k\$ / year  
Period: October 2015- September 2018  
Principal investigators: J. Budai (lead PI), M. Manley, O. Delaire, R. P. Hermann
12. *“Neutron Scattering Studies of Hybrid Excitations”*  
Funding Agency: US Department of Energy, Basic Energy Sciences  
Funding Type: Field Work Program  
Funding: ~1000 k\$ / year  
Period: October 2018 - 2021  
Principal investigators: R. P. Hermann (lead PI), M. Manley, R. Fishman, L. Lindsay
13. *“In situ ultrasound spectroscopy for neutron scattering”*  
Funding Agency: Oak Ridge National Laboratory  
Funding Type: LDRD  
Funding: 618 k\$ FY20, 570 k\$ FY21  
Period: October 2019 - present  
Principal investigators: R. P. Hermann (lead PI), V. Fanelli, A. Flores-Bettancourt, C. Hua, E. Çakmak, Y. Shinohara
14. *“Neutron Scattering Studies of Hybrid Excitations”*  
Funding Agency: US Department of Energy, Basic Energy Sciences  
Funding Type: Field Work Program  
Funding: ~1000 k\$ / year  
Period: October 2021 - present  
Principal investigators: R. P. Hermann (lead PI), M. Manley
15. *“Autonomous thermoelectric low-power source for marine environments”*  
Funding Agency: US Department of Energy, Water Power Technology Office  
Funding Type: Seedling  
Funding: ~50 k\$ / year  
Period: June 2022 – May 2023  
Principal investigators: R. P. Hermann (lead PI), H. Wang
16. *“ORNL Electro Cat 2.0 - Electrolysis” – Mössbauer characterization*  
Funding Agency: US Department of Energy, EERE  
Funding Type: AOP project.  
Funding: ~50 k\$ / year  
Period: June 2022 – May 2023  
Lab performer: D. Cullen

## **Refereeing, reviewing, and editorial activities**

### **Refereed Journals**

*American Mineralogist, Chemistry of Materials, Europhysics Letters, Energy and Environmental Science, Inorganic Chemistry, Journal of Applied Physics, Journal of Alloys and Compounds, Journal of Electron Spectroscopy, Journal of Materials Research, Hyperfine Interactions, MAGMA, Materials Research Society Symposium Proceedings, Nature, Physica B, Physical Chemistry-Chemical Physics, Physical Review B, Physical Review Letters, Phys. Status Solidi B, RSC Advances, Scientific Reports (a nature research journal), Solar Energy, Science.*

### **Editorial Board Members**

*Crystals, MDPI, 2021-*

### **Ph. D. thesis reviewing as external member.**

C. S. Birkel, U. Mainz, Chemistry, “*Wet chemistry synthesis towards nanostructures of thermoelectric antimonides*” (2010).

D. E. Conte, U. Montpellier II, Materials Chemistry, “*Study and optimization of interfaces in tin based composites for negative electrodes in high energy lithium-ion accumulators*” (translated from French title) (2010).

K. S. Siegert, RWTH Aachen University, Physics, “*Thermal Properties of Phase-Change Materials: From Lattice Dynamics to Thermoelectricity*” (2014).

G. Prabhathasree, Bhabha Atomic Research Centre, Physics, “*Inelastic Neutron Scattering and Computer Simulations of Superionic and Laser-Host Materials*” (2014).

M. Kumar Gupta, Bhabha Atomic Research Centre, Physics, “*Thermodynamical properties of functional materials: Neutron scattering and lattice dynamics studies*” (2016).

### **Large scale facilities**

*ILL subcommittee 7 beam time allocation panel member (2010-2014).*

*DESY research project review panel member PRP-3 (2010-2017).*

*ESRF proposal reviewing committee, panel HS&C05 (2011-2013). Beamline review committee ID18 (2009).*

*APS Advanced photon source, Spectroscopy (2016-2022).*

### **Project reviewing**

*US Department of Energy Office of Basic Energy Sciences (EFRC FY2014; Argonne program review 2020).*

*Laura Bassi Foundation, Austrian Research Promotion Agency.*



## Organization of international conferences and workshops

1. “*Nanostructured Thermoelectric Materials*”  
451. Wilhelm and Else Heraeus Seminar (75 participants).  
Bad Honnef, February 2010, R. P. Hermann, K. Nielsch, H. Böttner
2. “*Neutrons for Global Energy Solutions*”  
International conference jointly organized by SNS ORNL, ISIS, and JCNS,  
sponsored by the NMI-3 European integration program,  
Bonn, September 2010,  
R. P. Hermann, Th. Brückel, D. Richter, S. Bennington, R. McGreevy, I. Anderson, J. Hodges
3. “*Progress in Nuclear Resonance Scattering: from Methods to Materials*”  
498. Wilhelm and Else Heraeus Seminar (75 participants).  
Bad Honnef, February 2012, R. P. Hermann, V. Schünemann, H.-C. Wille, and R. Röhlberger
4. “*Thermal transport at the nanoscale*”  
529. Wilhelm and Else Heraeus Seminar (75 participants).  
Bad Honnef, April 2013, G. Schierning, R. P. Hermann, K. Nielsch, and E. Müller
5. “*Neutron scattering and nuclear resonance techniques for battery and fuel cell research*”  
Workshop, 25 participants, FZ Jülich, Stockholm Univ., Univ. Uppsala, U. Montpellier.  
Jülich, November 2013, R. P. Hermann, F. Tietz, G. Svensson, T. Gustaffson, M. Sougrati
6. “*Sapphire Ultraoptics for Synchrotron Radiation*”  
Workshop, 25 participants, FZ Jülich, AV Shubnikov Institute for Crystallography,  
Moscow, May 2014, R. P. Hermann, V. E. Asadchikov
7. “*37emes journées du Groupe Francophone de Spectroscopie Mössbauer*”  
Workshop, 50 participants, FZ Jülich,  
Jülich, May 2015, R. P. Hermann
8. “*5. International Workshop on Nuclear Resonance Scattering of Synchrotron Radiation: Status, Highlights, Methodology, and Trends; A workshop jointly organised with the Sapphire Ultra Optics for Synchrotron Radiation Helmholtz-Russia Joint Research Group 402 Sapphire Ultraoptics for Synchrotron Radiation*” Workshop, 50 participants, H.-C. Wille (PETRA III), E.E. Alp (APS), Y. Yoda (SPring-8), R. Rüffer (ESRF), R.P. Hermann (FZ Jülich),  
Hamburg, September 2015.
9. “*Electron and phonons: Interfaces and interactions*”  
621. Wilhelm and Else Heraeus Seminar (75 participants).  
Bad Honnef, April 2016, G. Schierning, R. P. Hermann, K. Nielsch, and C. Jooß

## Publications in International Reviewed Journals

*h-index:* Web-of-science/Publons: 37. ~4606 citations. *h-index/year since Ph. D.:* 2.

<http://www.researcherid.com/rid/F-6257-2013>

Google scholar: 44. ~6274 citations. i-10 index: 134.

<http://scholar.google.com/citations?hl=en&user=CQInQE8AAAAJ>

1. Hermann R. P.,  
**Numerical Simulation of a Quantum Particle in a Box,**  
*J. Phys. A* **30**, 3967 (1997).
2. Hermann R. P., Schumacher G., and Guyard R.,  
**Scale Relativity and Quantization of the Solar System - Orbit Quantization of the Planet's Satellites,**  
*Astron. Astrophys.* **335**, 281 (1998).
3. Hermann R. P., Hatert F., Franolet A.-M., Long G. J., and Grandjean F.,  
**Mössbauer Spectral Evidence for Next-nearest Neighbor Interactions within the Alluaudite Structure of  $\text{Na}_{1-x}\text{Li}_x\text{MnFe}_2(\text{PO}_4)_3$ ,**  
*Solid State Sci.* **4**, 507 (2002).
4. Delattre J. L., Stacy A. M., Young V. G., Long G. J., Hermann R. P., and Grandjean F.,  
**Study of the Structural, Electronic, and Magnetic Properties of the Barium-rich Iron(IV) Oxides,  $\text{Ba}_2\text{FeO}_4$  and  $\text{Ba}_3\text{FeO}_5$ ,**  
*Inorg. Chem.* **41**, 2834 (2002).
5. Reger D. L., Little C. A., Smith M. D., Rheingold A. L., Lam K. C., Concolino T. L., Long G. J., Hermann R. P., and Grandjean F.,  
**Synthetic, Structural, Magnetic, and Mössbauer Spectral Study of  $\{\text{Fe}[\text{HC}(3,5\text{-Me}(2)\text{pz})_3]_2\}\text{I}_2$  and its Spin-state Crossover Behavior,**  
*Eur. J. Inorg. Chem.* **5**, 1190 (2002).
6. Long G. J., Mahieu B., Sales B. C., Hermann R. P., and Grandjean F.,  
**Electronic Structure of Thallium Filled Skutterudites by X-ray Absorption and Mössbauer Spectroscopy,**  
*J. Appl. Phys.* **92**, 7236, (2002).
7. Hatert F., Hermann R. P., Long G. J., Franolet A.-M., and Grandjean F.,  
**An X-ray Rietveld, Infrared, and Mössbauer Spectral Study of the  $\text{NaMn}(\text{Fe}_{1-x}\text{In}_x)_2(\text{PO}_4)_3$  Alluaudite-type Solid Solution,**  
*Am. Mineral.* **88**, 211 (2003).
8. Piquer C., Hermann R. P., Grandjean F., Long Gary J., and Isnard O.,  
**A Magnetic and Mössbauer Spectral Study of  $\text{ErFe}_{11}\text{Ti}$  and  $\text{ErFe}_{11}\text{TiH}$ ,**  
*J. Appl. Phys.* **93**, 3414 (2003).
9. Hermann R. P., Jin R., Schweika W., Grandjean F., Mandrus D., Sales B. C., and Long G. J.,  
**Einstein Oscillators in Thallium Filled Antimony Skutterudites,**  
*Phys. Rev. Lett.* **90**, 135505 (2003). Focus in Physics, see: <http://focus.aps.org/story/v11/st13>  
Cho A., **Go-go Atoms Give Heat the Shake,** *Phys. Rev. Focus* **11**, 3 April (2003).
10. Holm A. P., Park S.-M., Condrón C. L., Kim H., Klavins P., Grandjean F., Hermann R. P., Long G. J., Kanatzidis M. G., Kauzlarich S. M., and Kim S.-J.,  
 **$\text{Eu}_{10}\text{Mn}_6\text{Sb}_{13}$ : A New Ternary Rare-Earth Transition Metal Zintl Phase,**  
*Inorg. Chem.* **42**, 4660 (2003).

11. Mishra S. R., Long G. J., Grandjean F., Hermann R. P., Roy S., Ali N., and Viano A. M.,  
**Magnetic Properties of Iron Nitride-Alumina Nanocomposite Materials prepared by High-Energy Ball Milling,**  
*Eur. Phys. J. D* **24**, 93 (2003).
12. Piquer C., Hermann R. P., Grandjean F., Isnard O., and Long G. J.,  
**A Magnetic and Mössbauer Spectral Study of TbFe<sub>11</sub>Ti and TbFe<sub>11</sub>TiH,**  
*J. Phys.: Condens. Matter* **15**, 7395 (2003).
13. Ellwood B. B., Harrold F. B., Benoist S. L., Thacker P., Otte M., Bonjean D., Long G. L., Shahin A. M., Hermann R. P., and Grandjean F.,  
**Magnetic Susceptibility Applied as an Age-Depth-Climate Relative Dating Technique Using Sediments from Scladina Cave, a Late Pleistocene Cave Site in Belgium,**  
*J. Archaeol. Sci.* **31**, 283 (2004).
14. Brown D. E., Johnson C. E., Grandjean F., Hermann R. P., Kauzlarich S. M., Holm A., and Long G. J.,  
**A Determination of the Antimony Valence State in Eu<sub>10</sub>Mn<sub>6</sub>Sb<sub>13</sub>: The Role of Valence in Intermetallic Compounds,**  
*Inorg. Chem.* **43**, 1229 (2004).
15. Hermann R. P., Grandjean F., Kauzlarich S. M., Jiang J., Brown S., and Long G. J.,  
**A Eu-151 Mössbauer Spectral Study of Eu<sub>14</sub>MnP<sub>11</sub>, Eu<sub>14</sub>MnAs<sub>11</sub>, and Eu<sub>14</sub>MnSb<sub>11</sub>,**  
*Inorg. Chem.* **43**, 7005 (2004).
16. Hermann R. P., Tegus O., Brück E., Buschow K. H. J., de Boer F. R., Long G. J., and Grandjean F.,  
**A Mössbauer Spectral Study of the Magnetocaloric FeMnP<sub>1-x</sub>As<sub>x</sub> Compounds,**  
*Phys. Rev. B* **70**, 214425 (2004).
17. Hermann R. P., Grandjean F., and Long G. J.,  
**Einstein Oscillators that Impede Thermal Transport,**  
*Am. J. Phys.* **73**, 110 (2005). Invited contribution.
18. Jiang J., Payne A. C., Olmstead M. M., Lee H., Klavins P., Fisk Z., Kauzlarich S. M., Hermann R. P., Grandjean F., and Long Gary J.,  
**A Study of the Complex Magnetic Ordering in Eu<sub>3</sub>InP<sub>3</sub>: A New Rare Earth Metal Zintl Compound,**  
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## Patents

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## Book Chapters

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6. Klobes B., Bessas D., Hermann R. P.,  
**High energy X-ray and Neutron Scattering on Bi<sub>2</sub>Te<sub>3</sub> Nanowires, Nanocomposites, and Bulk Materials**  
in *Thermoelectric Bi<sub>2</sub>Te<sub>3</sub> Nanomaterials*  
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7. Hermann R. P.,  
**M ssbauer Spectroscopy**,  
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## Invited Talks at Scientific Meetings

1. Hermann R. P., **Localized vibrational modes in crystalline solids**, *JCNS Symposium and European User Meeting, Forschungszentrum Jülich, Germany* (February 17<sup>th</sup> 2006).
2. Hermann R. P., **Nuclear inelastic scattering studies of lattice dynamics in thermoelectric materials**, *International Workshop on Nuclear Resonant Inelastic Scattering, Spring-8, Japan* (May 14<sup>th</sup>-15<sup>th</sup> 2007).
3. Hermann R. P., **Scattering methods applied to lattice dynamics in thermoelectric materials**, *152<sup>nd</sup> Meeting of the Acoustic Society of America, Salt Lake City, USA* (June 4<sup>th</sup>-8<sup>th</sup> 2007).
4. Hermann R. P., **Slow dynamics in solids: atomic tunneling in clathrates**, *International Conference on the Applications of the Mössbauer Effect, Kanpur, India* (October 14<sup>th</sup>-19<sup>th</sup> 2007).
5. Hermann R. P., **Unelastische Kernresonanz- und Neutronenstreuung an thermoelektrischen Materialien**, *Deutsche Tagung für Forschung mit Synchrotronstrahlung, Neutronen und Ionenstrahlen an Großgeräten, Berlin, Germany* (February 24<sup>th</sup>-26<sup>th</sup> 2010).
6. Hermann R. P., **Lattice dynamics in functional materials: past, present and future opportunities**, *Workshop on nuclear resonant scattering at Petra III, Hamburg, Germany* (July 2<sup>nd</sup> 2010).
7. Hermann R. P., **Application of <sup>121</sup>Sb and <sup>125</sup>Te nuclear resonance scattering to materials and nanomaterials characterization**, *6<sup>th</sup> Nassau-Argonne Mössbauer International Symposium, Garden City, New York, USA* (January 13<sup>th</sup>-14<sup>th</sup> 2011).
8. Hermann R. P., **Phonon spectroscopy in thermoelectric antimonides and tellurides**, *E-MRS Spring Meeting & MRS/E-MRS Bilateral Energy Conference, Nice, France* (May 9<sup>th</sup>-13<sup>th</sup> 2011).
9. Hermann R. P., **Diffusion nucléaire résonante par <sup>121</sup>Sb et <sup>125</sup>Te: le mystère de GeSb<sub>2</sub>Te<sub>4</sub>**, *GFSM 2011, Strasbourg, France* (May 18<sup>th</sup>-20<sup>th</sup> 2011).
10. Hermann R. P., **Antimony-121 and Tellurium-125 nuclear resonance scattering on thermoelectric and phase change materials**, *8<sup>th</sup> International Symposium on the Industrial Applications of the Mössbauer Effect, Dalian, China* (September 2<sup>nd</sup>-7<sup>th</sup> 2012).
11. Hermann R. P., **Nuclear resonance scattering above 30 keV: challenges and opportunities**, *Synchrotron Radiation Contact Group Meeting, Namur, Belgium* (September 11<sup>th</sup> 2012).
12. Hermann R. P., **Neutrons and Energy materials: Present research and future opportunities**, *German Neutron Scattering Conference 2012, Bonn, Germany* (September 24<sup>th</sup>-26<sup>th</sup> 2012).
13. Hermann R. P., **Nuclear inelastic scattering above 30 keV**, *7<sup>th</sup> North American Mössbauer Meeting, Austin, TX, USA* (January 11<sup>th</sup>-12<sup>th</sup> 2013).
14. Hermann R. P., **Lattice dynamics in nanostructured thermoelectric materials**, *Second International Symposium on Neutron Scattering, Mumbai, India* (January 13<sup>th</sup>-18<sup>th</sup> 2013).
15. Hermann R. P., **Specificities of the lattice dynamics in nanostructured thermoelectric materials**, *Second Advanced Conference on Inorganic Nanomaterials, Namur, Belgium* (July 19<sup>th</sup>-23<sup>th</sup> 2013).
16. Hermann R. P., **Inelastic scattering & resonant ultrasound spectroscopy for functional materials studies**, *166<sup>th</sup> Meeting of the Acoustic Society of America, San Francisco, USA* (December 2<sup>nd</sup>-5<sup>th</sup> 2013).
17. Hermann R. P., **Lattice dynamics in iron antimonides**, *International Conference on Thermoelectrics ICT 2014, Nashville TN, USA* (Jul. 7<sup>th</sup> – Jul. 10<sup>th</sup> 2014).

18. Hermann R. P., **The spin structure in iron oxide nanoparticles as seen by polarised neutrons and x-rays**, *Polarized Neutrons for Condensed Matter Investigations PNCMI-2014, Sydney, Australia* (Sep. 15<sup>th</sup> – 21<sup>th</sup> 2014).
19. Hermann R. P., **Nuclear resonance scattering above 30 keV**, *Hyperfine Interactions HFI-NQI 2014, Canberra, Australia* (Sep. 21<sup>st</sup> – 26<sup>th</sup> 2014).
20. Hermann R. P., **Lattice thermodynamics and phonon properties in nanostructured thermoelectrics**, *International Conference on Electronic Materials and Nanotechnology for Green Environment ENGE2014, Jeju, South Korea* (Nov. 16<sup>th</sup> – 19<sup>th</sup> 2014).
21. Hermann R. P., **Phonon spectroscopy in nanostructured thermoelectrics**, *Mat. Res. Society Meeting, Boston, USA* (Nov. 30<sup>th</sup> – Dec. 5<sup>th</sup> 2014).
22. Hermann R. P., **Anisotropic lattice dynamics in SnSeMoSe<sub>2</sub> ferecrystals**, *APS User Meeting, Chicago, USA* (May 10<sup>th</sup> – 13<sup>th</sup> 2015).
23. Hermann R. P., **Nanostructured thermoelectrics: insights from phonon spectroscopy**, *International Conference on Thermoelectrics ICT 2015, Dresden, Germany* (Jun. 28<sup>th</sup> – Jul. 2<sup>nd</sup> 2015).
24. Hermann R. P., **Mössbauer and nuclear resonant spectroscopy in phase change materials**, *International Conference on the Applications of the Mössbauer Effect, Hamburg, Germany* (September 13<sup>th</sup>-18<sup>th</sup> 2015).
25. Hermann R. P., **Phonons and bonding in information storage phase change materials**, *145<sup>th</sup> TMS 2016 Meeting, Nashville, USA* (February 14-18<sup>th</sup> 2016).
26. Hermann R. P., **Lattice dynamics and bonding in thermoelectric nanomaterials**, *EMN Meeting on Thermoelectric Materials, Orlando, USA* (February 22-26<sup>th</sup> 2016).
27. Hermann R. P., **An experimental phonon perspective on resonance bonding**, *International Conference on Thermoelectrics ICT 2016, Wuhan, China*, (May 28<sup>th</sup>-June 2<sup>nd</sup> 2016).
28. Hermann R. P., **From MHz to THz: how ultrasound and inelastic scattering see lattice dynamics**, *5<sup>th</sup> Joint Meeting of the Acoustical Society of America and Acoustical Society of Japan, Honolulu HI, USA* (November 28<sup>th</sup>-Dec 2<sup>nd</sup> 2016).
29. Hermann R. P., **Nuclear resonance scattering above 30 keV: success and opportunities**, *Research with High Energy X-rays at Ultra-Low Emittance Sources, Hamburg, Germany* (Feb 13-15, 2017).
30. Hermann R. P., **Phonon confinement in (SnSe)(MoSe<sub>2</sub>) Ferecrystals**, *International Conference on Thermoelectrics, Pasadena, California* (Jul 30-Aug 04, 2017).
31. Hermann R. P., **High resolution backscattering topography of sapphires for x-ray optics**, *European Materials Research Society, Strasbourg, France* (Jun 18-22, 2018).
32. Hermann R. P., **Acoustically mismatched nanoinclusions**, *International Conference on Thermoelectrics, Caen, France* (Jul 01-04, 2018).
33. Hermann R. P., **The spin structure in iron oxide nanoparticles as seen by neutron and nuclear resonance scattering**, *5<sup>th</sup> Mediterranean Conference on the Applications of the Mössbauer Effect, Montpellier, France* (May 09-23, 2019).
34. Hermann R. P., **Neutrons scattering by paramagnetic MnTe**, *2019 The North American Thermoelectric (Na-Te / Snyder) Workshop, Evanston, IL* (Aug 30-Sep 02 2019).

35. Hermann R. P., **Antiferromagnetism survives extreme chemical disorder in high-entropy oxides**, *Electronic Materials and Applications (EMA2020)*, Orlando, FL (Jan 22-24, 2020).
36. Hermann R. P., **Local insights on lattice dynamics and spins: how Mossbauer spectroscopy complements neutron scattering**, *Neutrons and Complimentary Techniques for Quantum Materials*, Oak Ridge, TN (Aug 11-14, 2020).
37. Hermann R. P., **Low-temperature high-pressure phonon spectroscopy in backscattering geometry**, *Satellite Workshop on Scientific Instrument Proposals for Extreme Pressures and Temperatures Research at PETRA IV*, DESY, Hamburg, Germany (Nov. 5-6, 2020).
38. Hermann R. P., **Sb and Te spectroscopy in backscattering geometry**, *Expert Workshop on Nuclear Resonant Scattering of Synchrotron Radiation*, On Line (Spring-8, Hyogo, Japan) (12-15 January, 2021).
39. Hermann R. P., **Neutron Scattering Studies of Hybrid Excitations**, *2021 Neutron Scattering Principal Investigators' Meeting, Sponsored by the U.S. Department of Energy, Office of Basic Energy Sciences*, On Line (15-17 December 2021).
40. Hermann R. P., **Mössbauer and Nuclear Resonant Spectroscopy of Antimony-121**, *GFSM 2022, Nancy, France* (May 18<sup>th</sup>-19<sup>th</sup> 2022).
41. Hermann R. P., **Neutron scattering in the Foundational Materials Science Section**, *Neutron Scattering on continuous sources – future developments. US-Japan workshop, Oak Ridge TN, USA* (Sep 19<sup>th</sup>-21<sup>st</sup> 2022).
42. Hermann R. P., **Atomic tunneling in crystalline materials**, *152<sup>nd</sup> TMS 20203 Meeting*, San Diego, CA (March 19<sup>th</sup>-23<sup>rd</sup> 2023).

## Invited Seminars and Lectures

1. Hermann R. P.,  
**Nuclear Techniques Applied to the Study of Filled Antimony Skutterudites and Germanium Clathrates,**  
Dept. of Materials Science & Engineering, *Knoxville, USA* (October 30<sup>th</sup> 2003).
2. Hermann R. P.,  
**Nuclear Techniques Applied to the Study of Filled Antimony Skutterudites,**  
Dept. of Chemistry, University of Missouri-Rolla, *Rolla, USA* (November 4<sup>th</sup> 2003).
3. Hermann R. P.,  
**The Dynamics of the Caged Guests in Filled Clathrates,**  
Dept. of Physics, The University of Tennessee, *Knoxville, USA* (February 21<sup>st</sup> 2005).
4. Hermann R. P.,  
**Nuclear Techniques Applied to the Study of Thermoelectric and Magnetocaloric Materials,**  
Dept. of Physics, The University of Mississippi, *Oxford, USA* (August 30<sup>th</sup> 2005).
5. Hermann R. P.,  
**The Dynamics of the Caged Guests in Filled Clathrates,**  
E.S.R.F., *Grenoble, France* (December 12<sup>th</sup> 2005).
6. Hermann R. P.,  
**Slow dynamics in solids: from tunneling to charge ordering,**  
Paul Scherrer Institute, *Villigen, Switzerland* (November 26<sup>th</sup> 2007).
7. Hermann R. P.,  
**Lattice dynamics in emerging functional materials,**  
Oak Ridge National Laboratory, *Oak Ridge, USA* (March 17<sup>th</sup> 2008).
8. Hermann R. P.,  
**Lattice dynamics in emerging functional materials,**  
University of California - Davis, *Davis, USA* (March 19<sup>th</sup> 2008).
9. Hermann R. P.,  
**Lattice dynamics in emerging functional materials,**  
T. U. München, Seminar “Neutronen in Forschung und Industrie”, *München, Germany* (June 9<sup>th</sup> 2008).
10. Hermann R. P.,  
**Lattice dynamics in emerging functional materials,**  
R.W.T.H. Aachen, *Aachen, Germany* (February 19<sup>th</sup> 2009).
11. Hermann R. P.,  
**Thermoelektrische Materialien für die Energietechnologie,**  
JCNS Presseworkshop “Neutronen”, **Garching, Germany** (November 26<sup>th</sup> 2009).
12. Hermann R. P.,  
**Streumethoden zur Untersuchung der Gitterdynamik in thermoelektrischen Materialien,**  
Universität Duisburg-Essen, Ringvorlesung “Thermoelektrik”, *Duisburg, Germany* (February 1<sup>st</sup> 2010).
13. Hermann R. P.,  
**Nuclear Inelastic Scattering by Sb and Te in thermoelectric materials,**  
Argonne National Laboratory, XSD IXS Forum, *Chicago, USA* (February 15<sup>th</sup> 2010).
14. Hermann R. P.,  
**Measurements by Synchrotron Radiation,**  
Thermoelectric Winter School, *Bremen, Germany* (February 14-19<sup>th</sup> 2010).

15. Hermann R. P.,  
**Scattering of Neutrons and X-rays in Functional Materials**,  
California Institute of Technology, *Pasadena, USA* (November 8<sup>th</sup> 2010).
16. Hermann R. P.,  
**Nuclear Inelastic Scattering in Thermoelectric Materials**,  
University of Oregon, *Eugene, USA* (November 12<sup>th</sup> 2010).
17. Hermann R. P.,  
**Lattice Dynamics in Functional Materials: Inelastic Scattering and Ultrasound Spectroscopy**,  
University of Montana, *Bozeman, USA* (November 15<sup>th</sup> 2010).
18. Hermann R. P.,  
**Scattering methods applied to thermoelectric materials**,  
EXXON Research Facility, *Annandale, USA* (January 12<sup>th</sup> 2011).
19. Hermann R. P.,  
**Good Vibrations in Functional Materials**,  
University of Hamburg and DESY, PIER Photon Science Colloquium, *Germany* (April 8<sup>th</sup> 2011).
20. Hermann R. P.,  
**Festkörperanalytik in der TE-Materialentwicklung**,  
Thermoelektrik-Kolloquium: Vom Pulver zum Thermogenerator, DLR Köln, *Germany* (June 30<sup>th</sup> 2011).
21. Hermann R. P.,  
**Lattice Dynamics in Functional Materials at the Juelich Centre for Neutron Science**,  
Georgian - German School and Workshop in Basic Science, Tbilisi, Georgia (August 6<sup>th</sup>-10<sup>th</sup> 2012).
22. Hermann R. P.,  
**Lattice dynamics in nanostructured thermoelectric materials**,  
Jet Propulsion Laboratory, Pasadena, CA, USA (December 5<sup>th</sup> 2012).
23. Hermann R. P.,  
**Lattice dynamics characterization**,  
Autumn School of the German Thermoelectric Society (DTG), *Waldeck, Germany* (October 3-4<sup>th</sup> 2013).
24. Hermann R. P.,  
**Introduction to neutron methods in materials research**, (Best lecture by student vote)  
HITEC Graduate School in Energy and Climate Research Method Days, *Jülich, Germany*  
(November 15<sup>th</sup> 2013). <http://www.hitec-graduate-school.de/>
25. Hermann, R.P.,  
**Mössbauer and nuclear resonance spectroscopies**,  
SFB917 Nanoswitches Summer School, *Jülich, Germany* (March 24<sup>th</sup>-28<sup>th</sup> 2014).
26. Hermann R. P.,  
**Thermoelectric materials**,  
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27. Hermann R. P.,  
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30. Hermann R. P.,  
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31. Hermann R. P.,  
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32. Hermann R. P.,  
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33. Hermann R. P.,  
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35. Hermann R. P.,  
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7. Hermann R. P., Mahmoud A., Brisbois M., Boschini F.  
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8. Mahy J. G., Tasseroul L., Herlitschke M., Hermann R. P., and Lambert S.,  
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9. Torres J. R., Fanelli V. R., Shinohara Y., May A. F., Ruiz-Rodriguez M., Everett M. S.,  
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**Resonant ultrasound spectroscopy probe for in-situ neutron scattering measurements**,  
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## Publications in Other Academic Journals

1. Hermann R. P.,  
**Rattling Atoms that Make a Crystal Mimic a Glass: Einstein Oscillators in Thallium Filled Antimony Skutterudites,**  
*Physicalia Magazine* **25**, 175 (2003).
2. **Element Specific Vibrational Dynamics in Filled Skutterudites,**  
*ESRF Highlights* p.22-23 (2005).
3. **Nuclear resonant spectroscopy on  $^{121}\text{Sb}$  and  $^{125}\text{Te}$ ,**  
*ESRF Highlights* p.18-19 (2005).
3. **PNSXM 2009: Workshop on Polarized Neutrons and Synchrotron X-rays for Magnetism ,**  
Hermann R., Rücker U., and Angst M., *Synchrotron Radiation News* **23**, 2, 16-17 (2010).
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5. **The “Nanostructured Thermoelectric Materials” 451. Wilhelm und Else Heraeus Seminar,**  
Hermann R., Nielsch K., and Böttner H., *Physik Journal* **9**, 54-55 (2010).
6. **“Neutrons for global energy solutions, A foresight study”,**  
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7. **The “Progress in Nuclear Resonance Scattering: from Methods to Materials” 498. Wilhelm und Else Heraeus Seminar,**  
Hermann R., Wille H.-C., Röhlberger R., and Schünemann, V., *Physik Journal* **11**, 72 (2012).
8. **The “Thermischer Transport auf der Nanoskala” 529. Wilhelm und Else Heraeus Seminar,**  
Schierning G., Hermann R., Nielsch K. und Müller E., *Physik Journal* **12**, 65 (2013).

## Awards and distinctions

1. Selection of “Hermann R. P., *et al.* *Phys. Rev. Lett.* **90**, 135505 (2003)” for the Physical Review Focus, Cho A., **Go-go Atoms Give Heat the Shake**, *Phys. Rev. Focus* **11**, 3 April (2003). <http://focus.aps.org/story/v11/st13>; see also Tomlin S., **Skittery Skutterudites**, *Nature Materials* **6**, 290 (2003).
2. Second prize for the best oral presentation for the contribution “Hermann R. P. *et al.*, **Rattling Atoms that Make a Crystal Mimic a Glass: Einstein Oscillators in Thallium Filled Antimony Skutterudites**” at the *International Scientific Meeting of the Belgian Physical Society, Ghent* (May 2003).
3. Selection of “Long G. J. *et al.*, *Phys. Rev. B* **71**, 140302(R) (2005)” for the ESRF Highlights 2005, **Element Specific Vibrational Dynamics in Filled Skutterudites**, *ESRF Highlights* p.22-23 (2005).
4. “Prix des Amis de l'Université de Liège 2007” for research on the guest dynamics in filled clathrates.
5. Recipient of a “Helmholtz-University” Young Investigator Group fellowship, Berlin (November 2007).
6. Selection of “Angst M., *et al.*, *Phys. Rev. Lett.* **99**, 256402 (2007)” for the APS Highlights 2007, **Incommensurate Phases due to Geometrical Frustration**, *APS Science 2007* p.14-15 (May 2008).
7. Selection of “Wille H. C. *et al.*, *Phys. Rev. B* **76**, 140301(R) (2007)” for the ESRF Highlights 2008, **Nuclear Resonant Scattering by  $^{121}\text{Sb}$  and  $^{125}\text{Te}$** , *ESRF Highlights* p. 18-19 (2008).
8. Selected as “Emerging Mössbauer Scientist”, *Mössbauer Effect Reference and Data Journal* **34(2)** 42-44 (2011).
9. Selection of “Sergueev I. *et al.*, *J. Synch. Rad.* **18**, 802-810 (2011)” for the ESRF Highlights 2011, **Sapphire monochromator for hard X-rays (>30 keV) with sub-meV bandwidth**, *ESRF Highlights* p. 23-24 (2011).
10. Selection of “Disch S. *et al.*, *New Journal of Physics* **14**, 013025 (2012).” for the ESRF Highlights 2011, **Shape induced symmetry in nanoparticle assemblies**, *ESRF Highlights* p. 34-35 (2011).
11. Selection of “Claudio T., *et al.*, *Phys. Stat. Solidi B* **251**, 919–923 (2014)” as Editor's Choice and Front Cover.
12. Selection of “Jafari A., *et al.*, *J. Phys. Chem. A* **124**, 7869-7880 (2020).” as Supplementary Cover.

## Group member awards and distinctions

1. Mrs. Paula Bauer, Best Poster Prize, “**Microstructure engineering design for thermoelectric materials: an approach to minimize thermal diffusivity**”, 451. WE Heraeus Seminar “Nanostructured thermoelectrics” (2010).
2. Mrs. Tania Claudio Weber, Best Oral Contribution Prize, “**Lattice Dynamics of Nanostructured Silicon for Thermoelectric Applications**”, Ph.D. Student Day of the MAIN graduate school "Materials for the future", Louvain-la-Neuve, Belgium, 06.11.2009
3. Dr. Benedikt Klobes, Best Poster Prize, “**Nuclear resonance scattering on Te oxides**”, International Conference on the Applications of the Mössbauer Effect, Kobe (2011).
4. Dr. Anne Möchel, Prize of the German Thermoelectric Society for the Best Dissertation, “**Lattice Dynamics in Thermoelectric Zintl Phases**”, Freiburg (2011).
5. Mr. Marcus Herlitschke, Best Poster Prize, “**Mössbauer spectroscopic Investigation of the Unconventional Hyperfine Field Behavior in FeNCN**”, International Conference on the Applications of the Mössbauer Effect, Opatija (2013).
6. Mr. Marcus Herlitschke, Best Poster Prize, “**Spin structure in  $\gamma$ -Fe<sub>2</sub>O<sub>3</sub> nanoparticles investigated in field with polarized resonant methods**”, GFSM, Montpellier, (2014).