Magdalena Wencka, Dr Curriculum Vitae

Personal Details

Name	Magdalena Wencka
Maiden Name	Frąckowiak
Corresponding address	Smoluchowskiego 17 60-179, Poznań, Polska
Phone	+48 61 86 95 206
E-mail	magdalena.wencka@ifmpan.poznan.pl
Date of birth	15.03.1973
Nationality	polish

Permanent Position

Institute of Molecular Physics, Polish Academy of Sciences
Department of Solid State Radiospectroscopy
ul. Smoluchowskiego 17, 60 – 179 Poznań, Poland
Position: Senior Researcher
Data of employment: 01.01.2004

Education

Postgraduate Studies, June 2019
School of Form, SWPS University of Social Sciences and Humanities, Poznań, Poland
Course: Innovation Management

PhD, October 2003
Institute of Physics, Adama Mickiewicza University, Poznań, Poland
Course: Physics
Title of PhD thesis: Dynamics of paramagnetic centres in calcite and other geological materials by EPR

MSc, July 1997
Institute of Physics, Adama Mickiewicza University, Poznań, Poland
Specialization: Experimental physics
Title of MSc thesis: EPR Dating of cave bear bone fossil remains

Professional Experience

Topics:

1. Properties (magnetic, electrical and thermal) of high entropy alloys, quasicrystals, intermetallic compounds, metal oxides, ceramics and perovskites (crystalline, amorphous and nanomaterials) by EPR, NMR, MPMS3 and PPMS
2. Multicalorics and multicaloric effect
3. Electron spin relaxation in polymers and molecular crystals.
4. Structure and dynamics of radiation defects in polymers and amorphous and crystalline materials.
5. EPR dating of archaeological and geological materials (age and accuracy).
6. Molecular dynamics of ionic liquids (NMR)
7. Natural radiation in caves

Experimental experience:

1. Magnetic Properties Measurement System (MPMS3: 1.8 K – 1000 K and under pressure up to 1.3 GPa)
2. Physical Property Measurement System (PPMS Quantum Design: 350 mK – 400 K)
3. EPR spectrometers: X-, Q-, W- band (Bruker ESP380E FT/CW, Bruker EPR EMX-10, Radiopan SE/X-2547, Bruker ELEXSYS 500, Bruker E680), 4 K - 300 K (cryostats: Oxford CF935, Oxford ESR 900)
4. Visual EPR
5. NMR spectrometer: 200 MHz and 400 MHz (4 K – 500 K), FFC (Stellar Spinmaster 2000: 8 KHz – 20 MHz)
6. ^{60}Co - γ radiation source (irradiation of samples, calibration) and UV lamp (EMITA VP-60)
7. γ-radiation meter (RUM-1, head SSU-3-2 with ZnS/AgO syndicators)

Languages:

English: fluent
Russian: communicative
German: fair
Slovene: basic
Latin: passive

Visiting positions

1. **Project Leader and Innovation Manager**: Condensed Matter Physics Department, Jožef Stefan Institute, Ljubljana, Slovenia
   "Magnetic and physical properties of high entropy alloys, quasicrystals and complex metallic alloys"
   PPMS down to 350 mK, MPMS3 from 1.8 K to 1000 K and up to 1.3 GPa
   2020 - 2021 (24 months)
   Host: Prof. J. Dolinšek

2. **Postdoc**: Condensed Matter Physics Department, Jožef Stefan Institute, Ljubljana, Slovenia
   "Magnetic and physical properties of quasicrystals, complex metallic alloys and superparamagnetic systems"
   PPMS, SQUID/VSM, EPR (9.5 GHz), NMR (200 MHz, 400 MHz)
   2008 (3 months), 2009 – 2010 (20 months), 2011 (2 months), 2012 (1 month), 2013 (2 months), 2014 (1 month), 2015 (2 months), 2016 (6 weeks); 2017, 2018, 2019 < 1 month
   Host: Prof. J. Dolinšek

3. Department für Geo- und Umweltwissenschaften Sektion Kristallographie, Ludwig-Maximilians-Universität München, Munich, Germany
   "Synthesis of the Ga_3Ni_2 intermetallic compound - a new promising catalyst for methanol production"
   Czochralski apparatus
   2015 (1 month)
   Host: Prof. P. Gille

4. Department of Physics, University of Antwerp, Wilrijk, Belgium
   "Structure of radiation defects in cellulose"
   EPR (95 GHz)
   2007 (two weeks)
   Host: Prof. S. van Doorslaer

5. EPSRC EPR National Service, University of Manchester, Manchester, Great Britain
   "Structure of radiation defects in calcite"
   EPR (95GHz)
   2006 (two weeks)
   Host: Prof. E. McInnes

6. Institute for Polymer Research, Max Planck Institute, Mainz, Germany
   "Structure of radiation defects in polymers and speleothems"
   EPR (95 GHz)
   2005 (two weeks)
   Host: Prof. G. Jeschke

7. Kazan Physical – Technical Institute, Kazan, Russia
   "Structure of radiation defects in hydroxyapatite"
   EPR (35 GHz)
   2005 (three weeks)
   Host: Prof. W. F. Tarasov

Grants/networks/scholarships

1. Bilateral project between Polish Academy of Sciences and Slovenian Academy of Sciences and Arts: "Multicaloric relaxor materials for new cooling technologies", Poland – Slovenia, 2015-2017 and 2018-2020, coordinator

2. "Rational design of molecular nanomagnets: synthesis, characterization, theoretical description and computer modelling of their properties", 2016-2020, National Science Centre Poland, researcher

3. The European Integrated Center for the Development of New Metallic Alloys and Compounds C-MAC, 2017 - now, Science Board and Governing Board Member, Promotion of Female Scientists Program Leader

4. Gender Equality Network in the European Research Area GENERA, GERI-4-2014, 01.09.2015 – 31.08.2018, representative of Institute of Molecular Physics Polish Academy of Sciences as Observer

5. Scholarship of the Deutscher Akademischer Austausch Dienst (DAAD): "Synthesis of the Ga_3Ni_2 intermetallic compound - a new promising catalyst for methanol production" at prof. Peter Gille group at Ludwig-Maximilians-Universität München, Department für Geo- und Umweltwissenschaften, Sektion Kristallographie, Munich, Germany, 01.01. – 31.01.2015

6. Intermetallic compounds as catalysts for steam reforming of methanol COST CM-0904, Management Committee Member, Working Group Leader (WG 2.3: Chemical bonding) 2010-2014:
   - Short-term scientific mission grant (STSM): Properties of γ - irradiated monocrystalline PdGa intermetallic compound, 01.10. – 31.10.2011, J. Stefan Institute, Ljubljana (Slovenia)
   - STSM: Metallicity and hydrogen absorption in $In_{52.2}Pd_{47.8}$, 23.11. – 15.12.2013, J. Stefan Institute, Ljubljana (Slovenia)

7. Radiative degeneration of glycosidic bond in cellulosic materials
   COST P15 STSM-1754, 2007, researcher

8. Influence of natural γ-radiation external dose rate changes for EPR datings of cave dripstones
   State Committee for Scientific Research, grant No. 3 PO4D 030 22, 2002 – 2004, main researcher

9. Rear earth elements and γ radiation in the mineralization zone of the Kletno region (the Sudety Mountains) grant of Adam Mickiewicz University, 2003, researcher

10. The oldest colonization of the Wrocław Glacial Valley. The age and the periods.
    State Committee for Scientific Research, grant No. 2 HO1H 023 23, 2002-2003, researcher

11. EPR dating of cave dripstones
    State Committee for Scientific Research, grant No. 6 PO4D 048 18, 2000, main researcher

12. Dating of the quaternary fossil bones
State Committee for Scientific Research, grant No.6 PO4D 056 15, 1998-2000, researcher

Awards

1. Institute of Molecular Physics PAS in Poznan Award for Scientific Achievements & International Cooperation, Poznań, Poland (2013)
2. Poster Award, The European Conference "Physics of Magnetism", Poznań, Poland (2011)
3. Posters Award, 4th Euroschool on Material Science, Ljubljana, Slovenia (2009)
4. Scientific Council of the Institute of Physics, Adam Mickiewicz University in Poznań Award for Outstanding PhD Thesis (2003)
5. Poster Award, XIXth Conference on Radio and Microwave Spectroscopy "RAMIS", Kiekrz, Poland (2001)

Membership

1. Polish EMR/EPR Group, secretary (2014 – 2019)
2. Polish EPR Society, treasurer (2007 - 2010)
3. Polish Society of Medical Physics, treasurer (2002 – 2004)

List of articles

1. A. Jelen, P. Koželj, D. Gačnik, S. Vrtnik, M. Krnel, G. Dražić, M. Wencka, Z. Jagličić, M. Feuerbacher, J. Dolinšek: Collective magnetism of a single-crystalline nanocomposite FeCoCrMnAl high-entropy alloy, J. Alloys Compd. 864, 158115, 2021

2. P. Koželj, S. Vrtnik, M. Krnel, A. Jelen, D. Gačnik, M. Wencka, Z. Jagličić, A. Meden, F. Danoix, J. Ledieu, M. Feuerbacher, J. Dolinšek: Out of-equilibrium spin dynamics and memory effect in the spin-glass CoCrFeMnNi high-entropy alloy, Journal of Magnetism and Magnetic Materials 523, 167579, 2021

3. U. Prah, M. Wencka, T. Rojac, A. Benčan, H. Uršič: $Pb(Fe_{0.5}Nb_{0.5})O_3$-$BiFeO_3$-based multicalorics with room-temperature ferroic anomalies, Journal of Material Chemistry C 8, 11282, 2020

4. M. Krnel, P. Koželj, S. Vrtnik, A. Jelen, M. Wencka, P. Gille, J. Dolinšek: Anisotropic Electrical, Magnetic, and Thermal Properties of In_3Ni_2 Intermetallic Catalyst, Journal of Inorganic and General Chemistry ZAAK 646, 1099–1104, 2020

5. U. Prah, T. Rojac, M. Wencka, M. Dragomir, A. Bradeško, A. Benčana, R. Sherbondye, G. Brenneckae, Z. Kutnjaka, B. Malič, H. Uršič: Improving the multicaloric properties of $Pb(Fe_{0.5}Nb_{0.5})O_3$ by controlling the sintering conditions and doping with manganese, Journal of the European Ceramic Society 39, 4122–4130, 2019

6. P. Koželj, S. Vrtnik, A. Jelen, M. Krnel, D. Gačnik, A. Meden, M. Wencka, J. Leskovec, S. Maiti, W. Steuer, J. Dolinšek: Discovery of a FeCoNiPdCu high-entropy alloy with excellent magnetic softness, Advanced Ingineering Materials 2019: 1801055

7. M. Wencka, J. Kovac, B. Likozar, A. Jelen, S. Vrtnik, P. Gille, J. Dolinšek: The effect of surface oxidation on the catalytic properties of Ga_3Ni_2 intermetallic compound for carbon dioxide reduction, Applied Surface Science, Journal of Analytical Science and Technology, 9, 12, 2018

8. M. Wencka, T. Apih, R. C. Koroš, J. Jenczyk, M. Jarek, K. Szutkowski, S. Jurga, J. Dolinšek: Molecular dynamics of 1-ethyl-3-methylimidazolium triflate ionic liquid studies by ^{1}H and ^{19}F nuclear magnetic resonance, Phys. Chem. Chem. Phys. 19, 15368, 2017

9. M. Wencka, S. Vrtnik, P. Koželj, Z. Jagličić, P. Gille, J. Dolinšek: Anisotropic electrical, thermal and magnetic properties of $Al_{13}Ru_4$ decagonal quasicrystalline approximant, Z. Kristallogr. 232, 647, 2017

10. S. Waplak, A. Ostrowski, M. Wencka, W. Bednarski: Microwave X-band Resonance in dopped $Cd_2Nb_2O_7$ monocrystal, Acta Physica Polonica A 132, 1, 2017

11. Z. Kabacińska, L, Yate, M. Wencka, R. Krzyminiewski, K. Tadyszak, E. Coy: Nanoscale effects of radiation (UV, X-ray and γ) on salcite surface: implications for its mechanical and physico-chemical properties, J. Phys. Chem. C 121, 13357, 2017

12. U. Prah, M. Wencka, Z. Kutnjak, M. Vrabelj, S. Drnovsek, B. Malic, H. Ursic: Multicalloric effect in polycrystalline $Pb(Fe_{0.5}Nb_{0.5})O_3$, Journal of Microelectronics, Electronic Components and Materials 47, 165, 2017

13. H. Ursic, V. Bobnar, B. Malic, C. Filipic, M. Vrebelj, S. Drnovsek, Y. Jo, M. Wencka, Z. Kutnjak: A multicalloric materials as link between electrocaloric and megnetocaloric refrigrnation, Scientific Reports 6, 26629, 2016

14. M. Wencka, M. Pillaca, P. Gille: Single crystal growth of Ga_3Ni_2 by Czochralski method, Journal of crystal growth 449, 114, 2016

15. M. Kaczkan, S. Turczyński, D. A. Pawlak, M. Wencka, M. Malinowski: Laser site-selective spectroscopy of Eu^{3+} ions doped $Y_4Al_2O_9$, Optical Materials 58, 412, 2016

16. M. Wencka, J. Schwerin, M. Klanjšek, M. Krnel, S. Vrtnik, P. Koželj, A. Jelen, G. Kapun, Z. Jagličić, I. Sharafutdinov, I. Chorkendorff, P. Gille, J. Dolinšek: Physical properties of the $GaPd_2$ intermetallic catalyst in bulk and nanoparticle morphology, Intermetallics 67, 35, 2015

17. Dziaugys, J. Macutkevic, S. Svirskas, R. Juskenas, M. Wencka, J. Banys, S. F. Motria, Yu Vysochanskii: MaxwelleWagner relaxation and anomalies of physical properties in $Cu_{0.15}Fe_{1.7}PS_3$ mixed material, Journal of Alloys and Compounds, 650, 386, 2015

18. S. Vrtnik, M. Wencka, A. Jelen, H. J. Kim, J. Dolinšek: Coronary stent as a tubular flow heater in magnetic resonance imaging, Journal of Analytical Science and Technology 6, 1, 2015

19. M. Wencka, M. Hahne, A. Kocjan, S. Vrtnik, P. Koželj, D. Korže, Z. Jagličić, M. Sorić, P. Popčcević, J. Ivkov, A. Smontara, P. Gille, S. Jurga, P. Tomeš, S. Paschen, A. Ormeci, M. Armbrüster, Yu. Grin, J. Dolinšek: Physical properties of the InPd intermetallic catalyst, Intermetallics 55, 56, 2014

20. J. B. Lee, H. J. Kim, J. Lužnik, A. Jelen, D. Pajić, M. Wencka, Z. Jagličić, A. Meden, J. Dolinšek: Synthesis and Magnetic Properties of Hematite Particles in a ‘‘Nanomedusa’’ Morphology, Journal of Nanomaterials, 2014

21. N. Lopič, A. Jelen, S. Vrtnik, Z. Jagličić, M. Wencka, R. Starc, A. Blinc, J. Dolinšek: Quantitative Determination of Magnetic Force on a Coronary Stent in MRI, J. Mag. Reson. Imaging 37, 391–397, 2013

22. R. Mackeviciute, M. Ivanova, J. Banys, N. Novak, Z. Kutnjak, M. Wencka, J. Scott: The perfect soft mode: giant phonon instability in a ferroelectric, J. Phys.: Condens. Matter 25, 212201, 2013

23. J. B. Lee, W. G. Hong, Z. Jagličić, S. Jazbec, M. Wencka, A. Jelen, J. Dolinšek: Canted antiferromagnetism on a nanodimentional spherical surface geometry: The case of $MnCO_3$ small hollow nanospheres, Phys. Rev. B 86, 224407, 2012

24. N. Novak, R. Pirc, M. Wencka, Z. Kutnjak: High-Resolution Calorimetric Study of $Pb(Mg_{1/3}Nb_{2/3})O_3$ Single Crystal, Phys. Rev. Lett. 109, 037601, 2012

25. M. Bobnar, P. Jeglič, M. Klanjšek, Z. Jagličić, M. Wencka, P. Popčević, J. Ivkov, D. Stanić, A. Smontara, P. Gille, J. Dolinšek: Intrinsic anisotropic magnetic, electrical, and thermal transport properties of *d*-Al-Co-Ni decagonal quasicrystals, Phys. Rev. B 85, 024205, 2012

26. M. Klanjšek, A. Gradišek, A. Kocjan, M. Bobnar, P. Jeglič, M. Wencka, Z. Jagličić, P. Popčević, J. Ivkov, A. Smontara, P. Gille, M. Armbrüster, Yu. Grin, J. Dolinšek: PdGa intermetallic hydrogenation catalyst: an NMR and physical property study, J. Phys. Condens. Matter 24, 085709, 2012

27. M. Bobnar, S. Vrtnik, Z. Jagličić, M. Wencka, Can Cui, An Pang Tsai, J. Dolinšek: Electrical, magnetic, and thermal properties of the single-grain $Ag_{42}In_{42}Yb_{16}$ icosahedral quasicrystal: Experiment and modeling, Phys. Rev. B 84, 134205, 2011

28. T. Toliński, D. Kostrzewa, K. Synoradzki, A. Szlaferek, M. Wencka, J. Dolinšek: Kondo lattice – fluctuating valence transition in $Ce(Cu_{1-x}Ni_x)_4Al$ compounds, Phys. Status Solidi B 248, 2186, 2011

29. M. Wencka, S. Jazbec, Z. Jagličić, S. Vrtnik, M. Feuerbacher, M. Heggen, S. Roitsch, J. Dolinšek: Electrical resistivity of the μ-Al_4Mn giant-unit-cell complex metallic alloy, Philos. Mag. 91: 19, 2756, 2011

30. Gradišek, B. Dimnik, S. Vrtnik, M. Wencka, M. Zdanowska-Frączek, G. V. Lavrova, J. Dolinšek: The hydrogen dynamics of $CsH_5(PO_4)_2$ studied by means nuclear magnetic resonance, J. Phys.: Condens. Matter 23, 085901, 2011

31. S. Jazbec, Z. Jagličić, S. Vrtnik, M. Wencka, M. Feuerbacher, M. Heggen, S. Roitsch, J. Dolinšek: Geometric origin of magnetic frustration in the μ-Al_4Mn giant-unit-cell complex intermetallic, J. Phys.: Condens. Matter 23, 045702, 2011

32. C. Filipič, V. Bobnar, S. Turczyński, D. A. Pawlak, M. Wencka, J. Dolinšek, A. Levstik: Influence of the magnetic field on phase transitions in $PrAlO_3$, J. App. Phys. 108, 116102, 2010

33. J. Dolinšek, M. Wencka, M. Jagodič, Z. Jagličić, S. Gottlieb-Schönmeyer, F. Ritter, W. Assmus: Slow-charge-carrier electronic transport in the heavy-fermion $YbCu_{4.25}$ complex intermetallic, Solid. State Commun. 150, 1629, 2010

34. M. Wencka, M. Jagodič, A. Gradišek, A. Kocjan, Z. Jagličić, P. J. McGuiness, T. Apih, Y. Yokoyama, J. Dolinšek: Physical properties of $Zr_{50}Cu_{40-x}Al_{10}Pd_x$ bulk glassy alloys, Journal of Alloys Compd. 504, 16, 2010

35. P. Popčević, A. Smontara, J. Ivkov, M. Wencka, M. Komelj, P. Jeglič, S. Vrtnik, M. Bobnar, Z. Jagličić, B. Bauer, P. Gille, H. Borrmann, U. Burkhardt, Yu. Grin, J. Dolinšek: Anisotropic properties of the $Al_{13}Fe_4$ complex intermetallic and its ternary derivative $Al_{13}(Fe, Ni)_4$, Phys. Rev. B 81, 184203, 2010

36. M. Heggen, M. Feuerbacher, J. Ivkov, P. Popčević, I. Batistić, A. Smontara, M. Jagodič, Z. Jagličić, J. Janovec, M. Wencka, J. Dolinšek: Anisotropic properties of the Taylor-phase T-$Al_{72.5}Mn_{21.5}Fe_{6.0}$ complex intermetallic, Phys. Rev. B 81, 184204, 2010

37. M. Wencka, S. Vrtnik, M. Jagodič, Z. Jagličić, S. Tulczyński, D. A. Pawlak, J. Dolinšek: Observation of anomalous magnetism in the low-temperature monoclinic phase of single-crystalline $PrAlO_3$ perovskite, Phys. Rev. B 80, 224410, 2009

38. M. Wencka, A. Jelen, M. Jagodič, V. Khare, Ch. Ruby, J. Dolinšek: Magnetic and EPR study of ferric green rust- and ferrihydrite-coated sand prepared by different synthesis routes, J. Phys. D: Appl. Phys. 42, 245301, 2009

39. M. Wencka, S. Lijewski, S. K. Hoffmann: Dynamics of CO_2^- radiation defects in natural calcite studied by ESR, electron spin echo and electron spin relaxation, J. Phys.: Condens. Matter 20, 255237, 2008

40. S. Lijewski, S. K. Hoffmann, J. Goslar, M. Wencka, V. A. Ulanov: Dynamical properties and instability of local fluorite BaF_2 structure around doped Mn^{2+} ions – EPR and electron spin echo studies, J. Phys.: Condens. Matter 20, 385208, 2008

41. S. K. Hoffmann, J. Goslar, A. Nowicka, M. Wencka: Diffusive EPR line width behavior in two-dimensional $Cu(Hippurate)_2*4H_2O$ single crystal, Solid State Commun. 146, 372, 2008

42. S. Lijewski, M. Wencka, S. K. Hoffmann, M. Kempiński, W. Kempiński, M. Śliwińska-Bartkowiak: Electron spin relaxation and quantum localization in carbon nanoparticles: electron spin echo studies, Phys. Rev. B 77, 014304, 2008

43. M. Wencka, K. Wichłacz, H. Kasprzak, S. Lijewski, S. K. Hoffmann: Free radicals and their electron spin relaxation in cellobiose. X-band and W-band ESR spectra and electron spin echo studies, Cellulose 14, 183-194, 2007

44. J. Goslar, M. Wencka, S. Lijewski, S. K. Hoffmann: Effects of lattice and local dynamics in EPR spectra and electron spin relaxation of vibronic $Cu(imidazole)_6$ complexes in $Zn(imidazole)_6Cl_2*H_2O$ crystals, J. Phys. Chem. Sol. 67, 2614-2622, 2006

45. M. Wencka, S.K. Hoffmann, R. Krzyminiewski, S. Mielcarek: Temperature effects in ESR spectra of radical centres in dripstone calcite samples used for ESR dating. Acta Physica Polonica A 108, 491-503, 2005

46. M. Wencka, S. K. Hoffmann, H. Hercman: EPR dating of hydroxyapatite from fossil bones. Transient effect after γ and UV irradiation. Acta Physica Polonica A 108, 331-337, 2005

47. M. Wencka, R Krzyminiewski: Identification of paramagnetic centres and the dating of cave dripstones by Electron Paramagnetic Resonance, Appl. Mag. Res., 26, 561–578, 2004

48. R. Krzyminiewski, M. Wencka: Datowanie metodą Elektronowego Rezonansu Paramagnetycznego szczątków kostnych zwierząt ze stanowiska paleolitycznego we Wrocławiu Oporowie (EPR dating of fossil bones of animals from Paleolithic site in Wrocław Oporów), Acta Universitatis Wratislaviensis, No. 2485, Studia Archeologiczne XXXIII, str. 283-300, Wrocław, 2002

49. M. Frąckowiak, R. Krzyminiewski, H. Hercman: Electron Paramagnetic Resonance for Dating of Fossil Organic Remains, Geochronometria, 19, 59-63, 2000

50. R. Krzyminiewski, M. Frąckowiak: Electron Paramagnetic Resonance in Investigation of Geological Materials, Mol. Phys. Rev., 28, 89-100, 2000

51. R. Krzyminiewski, M. Frąckowiak: CREM in application to EPR dating technique, Geologos, 5, 65-75, 2000

Oral Contributions/Lectures

(*) - „invited lectures”

1. M. Wencka* (key speaker): Discovery of a FeCoNiPdCu High-Entropy Alloy with Excellent Magnetic Softness International Symposium Nanomaterials “Microstructure and Properties: TRAMP19”, 7-9.11.2019, Marrakech, Morocco

2. M. Wencka*: Magnetism by SQUID and EPR, Electronic Ceramic Department, J. Stefan Institute, Ljubljana, Slovenia

3. M. Wencka: Physical properties of of Ga_3Ni_2 intermetallic – a new promising catalyst for carbon dioxide reduction, C-MAC Days, 20-23.11.2017, Athens, Greece

4. M. Wencka, P. Gille, M. Pillaca, V. Dasireddy, B. Likozar, Z. Jagličić, A. Jelen, S. Vrtnik, J. Dolinšek: Physical and catalytical properties of Ga_3Ni_2 intermetallic – a new promising catalyst for carbon dioxide reduction, C-MAC Days, 21-23.11.2016, Bratislava, Check Republic

5. M. Wencka*, J. Schwerin, M. Klanjšek, M. Krnel, S. Vrtnik, P. Koželj, A. Jelen, G. Kapun, Z. Jagličić, I. Sharafutdinov, I. Chorkendorff, P. Gille, J. Dolinšek: Physical properties of the $GaPd_2$ intermetallic catalyst and the role of active–site–isolation concept for the catalytic selectivity, C-MAC Days, 24 – 25.11.2015, Grenoble, France

6. M. Wencka: Electronic structure and chemical bonding of InPd – calculations and experimental results, COST Action CM0904 4th International Symposium of Intermetallic Compounds in Catalysis, St. Margerita Ligure, Italy, 05.04.-09.04.2014

7. M. Wencka, W. Bednarski, Z. Jagličić, S. Matam, J. Kuc: Oxidation state and conformation of cobalt in Pd- and Zn- substituted $LaCoO_3$ – a new catalyst for hydrogen production, III Forum Polskiej Grupy EMR/EPR, Kraków, Poland 23.06. – 25.06.2014

8. M. Wencka: Kondo lattice – fluctuating valence transition in $Ce(Cu_{1-x}Ni_x)_4Al$ compounds, C-MAC Days, Zagreb, Croatia, 08.12.-11.12.2014

9. M. Wencka*: Intrinsic anisotropic magnetic, electrical and thermal transport properties of *d*-Al-Co-Ni decagonal quasicrystals, International Conference on Quasicrystals, 01.-06.09.2013, Kraków, Poland

10. M. Wencka: Complex magnetism of $MnCO_3$ small hollow nanospheres: from AFM/FM to spin glass, EOROMAR 2013, 30.06.-05.07.2013, Hersonissos, Greece

11. M. Wencka: Magnetic and physical properties of bulk (Ga-, In-, Zn)Pd intermetallic compound as a consequence of covalent bonding, 3nd International Symposium on Intermetallic Compounds in Methanol Steam Reforming, 18.06.-22.06.2013, Chania, Greece

12. M. Wencka, W. Bednarski, A. Ostrowski, J. Dolinšek, M. Armbrüster, Yu. Grin: γ-ray activation of GaPd intermetallic compound for EPR surface studies, 3nd International Symposium on Intermetallic Compounds in Methanol Steam Reforming, 18.06.-22.06.2013, Chania, Greece

13. M. Wencka*: Properties of PdGa intermetallic hydrogenation catalyst, 2nd International Symposium on Intermetallic Compounds in Methanol Steam Reforming, 27.06.-29.06.2012, Munich, Germany

14. M. Wencka*, A. Gradišek, M. Bobnar, P. Gille, J. Dolinšek: Bulk physical properties of a monocrystalline PdGa catalyst material, 1st International Symposium on Intermetallic Compounds in Methanol Steam Reforming, 18-20.09.2011, Berlin, Germany

15. M. Wencka*: Magnetic and physical properties of giant-unit-cell intermetallics, Recent Advances in Broad-Band Solid-State NMR of Correlated Electronic Systems, Trogir, Croatia, 2010

16. M. Wencka*: ^{1}H diffusion in Zr-based intermetallic compounds – NMR in the static fringe field, AMPERE NMR School, Wierzba, Poland, 2010

17. M. Wencka*: Electronic transport and NMR study of the $YbCu_{4.25}$ heavy-fermion intermetallic compound, Magnetic Resonances in Highly Frustrated Magnetic Systems, Kranjska Gora, Slovenia, 2010

18. M. Wencka*: Bulk Metallic Glasses: properties, applications and examples, Maribor, 9th Christmas Symposium of Physicists. Slovenia, 2008

19. M. Wencka, S. Lijewski, S. K. Hoffmann: Are there any implications for ESR dating from electron spin relaxation studies? 22st International Meeting on Radio and Microwave Spectroscopy, Będlewo, Poland, 2007

20. M. Wencka*: Advanced EPR techniques for EPR dating – progress in methodology, 9th International Conference "Methods of Absolute Chronology", Gliwice, Poland

21. M. Wencka*, S. K. Hoffmann: EPR study of dripstone calcite, Spectroscopy, X-Ray Radiography, Crystallography and Crystallochemistry of Minerals, Kazan, Russia 2005

22. M. Wencka*: Electron Paramagnetic Resonance Application for Dating of Fossil Bones, Modern Problems of Chemical Physics – The International Symposium, Kazan, Russia, 2005

23. M. Wencka, S. K. Hoffmann, H. Hercman: EPR datings of hydroxyapatite from fossil bones and natural UV significance, 21st International Meeting on Radio and Microwave Spectroscopy, Poznań, Poland, 2005

24. M. Wencka: The storage conditions in EPR Dating, 8th International Conference "Methods of Absolute Chronology" Ustroń, Poland, 2004

25. R. Krzyminiewski, M. Frąckowiak: Electron Paramagnetic Resonance in investigation of geological materials, Specialized Colloque AMPERE, Pisa, Italy, 1999

Training

1. Negotiations, 12-14.12.2016, Nowy Dębiec, Poland
2. Joint C-MAC and COST CM0904 Euroschool on Intermetallic Compounds in Catalysis, Dresden, Germany, 2012
3. Recent Advances in Broad-Band Solid-State NMR of Correlated Electronic Systems, Trogir, Croatia, 2010
4. AMPERE NMR School, Wierzba, Poland, 2010
5. 5th European School on Material Science, Ljubljana, Slovenia, 2010
6. Perspectives in Highly Frustrated Magnetism, Dresden, Germany, 2010
7. Magnetic Resonances in Highly Frustrated Magnetic Systems, Kranjska Gora, Slovenia, 2010
8. 4th European School on Material Science, Ljubljana, Slovenia, 2010
9. 3th European School on Material Science, Ljubljana, Slovenia, 2010
10. Dynamics in Electron Spin Resonance: Theory, implementation and Application, COST P15 Action, Padova, Italy, 2007
11. Electron – Nuclear Spin Interactions, COST P15 Workshop, Tarragona, Spain, 2007
12. Fourier Transform - EPR BRUKER Training Course, Karlsruhe, Germany, 2005
13. European EPR Summer School and COST Training School, Wiesbaden, Germany, 2005
14. Backgrounds of Vacuum Techniques, Kraków, Poland, 2004
15. Modern EPR Spectroscopy, Methodology and Applications in Physics, Chemistry and Biology, Retie, Belgium, 2002
16. Course for teachers of physics, Poznań, Poland, 1997

Teaching Experience

1. Institute of Molecular Physics, Polish Academy of Sciences, Poznań, Poland (2004 – now)
   Specialized laboratory for students of 4th course of Physics
   EPR laboratory exercises for students of 4th and 5th course of Physics
   EPR laboratory exercises for students of 5th course of Physics (MSc level)

2. Institute of Physics, Adam Mickiewicz University, Poznań, Poland (1997 – 2002)
   Laboratory exercises for students of 1st course of Physics
   Laboratory exercises for students of 2st course of Physics
   Lecturing: "Methods for investigation of minerals and rocks" for students of 4th course of Geology

Others

1. Member of Wielkopolska Caving Club (2002 - now)
2. Member of Solidarity IFM PAN (2016 – now)
3. Member of Business and Professional Women (from 2018 - now)
4. Fun of motorcycling (tourism & racing)
5. High level of soft skills