

Sibylle I. Mayr

List of Publications

Publications in peer-reviewed journals:

- Sviridov V., Mayr S., and Shapiro S.A. (2017) **Elastic properties of two VTI shale samples as a function of uniaxial stress: experimental results and application of porosity-deformation approach.** *Geophysics* **82**:6, C201-C210, doi: 10.1190/geo2016-0459.1
- Mayr S.I., Niemann R., and Shapiro S.A. (2016) **Understanding of elastic anisotropy of shale under triaxial loading: Porosity-deformation approach.** *Geophysics*, 81(5): C163–C175, doi: 10.1190/geo2015-0423.1. <http://dx.doi.org/10.1190/geo2015-0423.1>.
- Popov Yu., **Mayr S.***, Romushkevich R., Burkhardt H., Wilhelm H., (2014) **Petrophysical Properties of Impactites taken from four Meteoritic Impact Structures**, (online: 15. May 2014) *Meteoritics & Planetary Science*, Vol. 49, Issue 5, pp. 896–920. doi: 10.1111/maps.12299
- Mayr, S., Stanchits, S., Langenbruch, C., Dresen, G. and Shapiro, S., (2011) **Acoustic Emission induced by Pore Pressure Changes in Saturated Rocks**, *Geophysics*, 76, MA21; doi:10.1190/1.3569579 (online: 12 May 2011).
- Stanchits, S., S. Mayr, S. Shapiro, and Dresen, G., (2011) **Fracturing of porous rock 645 induced by fluid injection.** *Tectonophysics* 503, Issues 1-2, 129-145, doi:10.1016/j.tecto.2010.09.022 (25 April 2011)
- Popov, Y., Romushkevich, R., Korobkov, D., Mayr, S., Bayuk, I., Burkhardt, H. and Wilhelm, H., (2011) **Thermal properties of rocks of the borehole Yaxcopoil-1 (Impact Crater Chicxulub, Mexico).** *Geophysical Journal International*, 184, 729–745. doi: 10.1111/j.1365-246X.2010.04839.x (February 2011)
- Mayr, S.I., Burkhardt, H., Popov, Y., Romushkevich, R., Miklashevskiy, D., Gorobtsov, D., Heidinger, P., and Wilhelm, H., (2009) **Physical rock properties of the Eyreville core, Chesapeake Bay impact structure**, in Gohn, G.S., Koeberl, C., Miller, K.G., and Reimold, W.U., eds., *The ICDP-USGS Deep Drilling Project in the Chesapeake Bay Impact Structure: Results from the Eyreville Core Holes: Geological Society of America Special Paper 458*, 137–163, doi:10.1130/2009.2458(07)
- Heidinger, P., Wilhelm, H., Popov, Y., Safanda, J., Burkhardt, H., and Mayr, S., (2009) **First results of geothermal investigations, Chesapeake Bay impact structure, Eyreville boreholes**, in Gohn, G.S., Koeberl, C., Miller, K.G., and Reimold, W.U., eds., *The ICDP-USGS Deep Drilling Project in the Chesapeake Bay Impact Structure: Results from the Eyreville Core Holes: Geological Society of America Special Paper 458*, 931–940, doi: 10.1130/2009.2458(39).
- Mayr, S.I., A. Wittmann, H. Burkhardt, Yu. Popov, R. Romushkevich, I. Bayuk, P. Heidinger, and H. Wilhelm (2008), **Integrated Interpretation of Physical Properties of Rocks of the Borehole YAXCOPOIL-1 (Chicxulub impact structure)**, *J. Geophys. Res.*, v. 113, 21 p. B07201, doi:10.1029/2007JB005420.
- Mayr S, Burkhardt H, Popov Y, Wittmann A (2007): **Estimation of hydraulic permeability considering the micro morphology of rocks of the borehole YAXCOPOIL-1 (Impact crater Chicxulub, Mexico).** *Int J Earth Sci (Geol Rundsch)*, 97, 385-399, doi: 10.1007/s00531-007-0227-6.
- Mayr S.I and Burkhardt H (2006). **Ultrasonic Properties of Sedimentary Rocks: Effect of Pressure, Saturation, Frequency and Microcracks.** *Geophys. J. Int.* 164, 246–258.

Wilhelm H, Popov Y, Burkhardt H, Šafanda J, Cermák V, Heidinger P, Korobkov D, Romushkevich R and Mayr S (2005). **Heterogeneity effects in thermal borehole measurements.** J. Geophys. Eng. 2 No 4, 357-363.

Popov Yu, Romushkevich R, Bayuk I, Korobkov D, Mayr S, Burkhardt H and Wilhelm H (2004): **Physical Properties of Rocks from the Upper Part of the Yaxcopoil-1 Drillhole (Chicxulub Crater).** Meteoritics and Planetary Science 39, No 6, 799-812.

Manuscripts submitted to peer-reviewed journals:

Sviridov V., Mayr S., and Shapiro S.A. **Rock elasticity as a function of the uniaxial stress: laboratory measurements and theoretical modelling of vertical transversely isotropic and orthorhombic shales.** Geophysical Prospecting (under review).

Extended Abstracts (peer-reviewed):

Mayr S.I. Sviridov V. A. and Shapiro S. A. (2017). **Some Constrains for Velocity Prediction by Means of the Porosity Deformation Approach.** 79th EAGE Conference and Exhibition 2017, DOI: 10.3997/2214-4609.201701195

Sviridov V., Mayr S.I., and Shapiro S.A. (2016) **Elastic properties of VTI and HTI shale samples as a function of stress: Laboratory measurements versus theoretical modeling.** In SEG Technical Program Expanded Abstracts 2016, pages 3184–3189. doi: 10.1190/segam2016- 13857145.1. URL <http://library.seg.org/doi/abs/10.1190/segam2016-13857145.1>. SEG Conference in Dallas.

Mayr, S.I. and H. Wilhelm (2016) **Permeability Estimations Based on Internal Surface and NMR T2 for Chesapeake Bay Impact Structure (Eyreville Cores).** 78th EAGE Conference & Exhibition, 30 May - 2 June 2016, Vienna, Austria; pp. 1-4.

Sviridov V., Mayr S., S. Shapiro (2016) **The Influence of Uniaxial Stress Conditions on the Elastic Properties of Vertical Transversely Isotropic Shale** Fifth EAGE Shale Workshop in Catania, Italy. 2-4 May 2016

Mayr, S. and Popov, Y. (2015) **Petrophysical characteristics of impactites.** In Bridging the Gap III: Impact Cratering in Nature, Experiments, and Modeling; pp. 1-2.

Niemann R., Mayr S., S. Shapiro (2015) **Application of the extended porosity deformation approach to an HTI shale sample under triaxial stress conditions.** 77th EAGE Conference and Exhibition, 1-4 June 2015, Madrid, Spain, pp. 1–2.

Sviridov V., Mayr S., S. Shapiro (2015) **The influence of uniaxial stress conditions on the elastic properties of vertical transversely isotropic shale.** 77th EAGE Conference and Exhibition, 1-4 June 2015, Madrid, Spain, pp. 1–4.

Mayr S. Sviridov V., Shapiro S. (2014) **Comparison of p- and s-wave velocities in a transversal isotropic sandstone and a shale under uniaxial loading conditions.** 76th EAGE Conference & Exhibition 2014, Amsterdam RAI. The Netherlands, 16-19 June 2014, pp. 1–4.

Mayr S and Burkhardt H. in close cooperation with Popov Yu and Wilhelm H (2006): **Integrated Interpretation of Physical Properties of Rocks of the Borehole YAXCOPOIL-1.** ICDP-IODP Workshop on Chicxulub Crater Drilling, GeoForschungsZentrum Potsdam, Germany, 11 and 12 September 2006, pp. 1-2.

Kenkmann T, Thoma K, Deutsch A, Behner T, Wünnemann K, Reimold W.U, Schmitt R.T, Hecht L, Patzschke M, Yaramanci U, Mayr S, Grosse C and Dresen G (2006): **Hypervelocity impact into dry and wet Sandstone.** "37th Lunar and Planetary Science Conference" in Houston 2006, pp1-2.

Other contributions to Conferences and Meetings, Reports:

Mayr S., Sviridov V., Niemann R., and Shapiro S.A. (2018) **Stress dependency of seismic velocity in anisotropic sedimentary rocks (Spannungsabhängigkeit der**

- seismischen Geschwindigkeit in anisotropen sedimentären Gesteinen)** DGMK-Research Report 741-1. Hamburg, ISSN 0937-9762; ISBN 978-3-941721-92-0
- Mayr S.I., Sviridov V., and Shapiro S.A. (2017) **Spannungsabhängigkeit der seismischen Geschwindigkeit in anisotropen sedimentären Gesteinen: Anwendung des porosity deformation approach.** In *DGMK/ÖGEW-Frühjahrstagung, " Perspektiven für Erdöl und Erdgas - Sicher und innovativ aus Deutschland"*, Celle, 5./6. April 2017, DGMK-Tagungsbericht 2017-1, ISBN 978-3-941721-73-9, pages 1–10.
- Sviridov V., Mayr S.I., and Shapiro S.A. (2017) **Stress dependency of elastic parameters in shales with different symmetries. VTI versus orthorhombic elastic medium.** In *DGMK/ÖGEW-Frühjahrstagung, " Perspektiven für Erdöl und Erdgas - Sicher und innovativ aus Deutschland"*, Celle, 5./6. April 2017, DGMK-Tagungsbericht 2017-1, ISBN 978-3-941721-73-9, pages 1–7.
- Mayr S.I., Sviridov V., and Shapiro S.A. (2017) **Geschwindigkeitsvoraussage mittels des Porositätsdeformationsansatzes: einige unterstützende Bedingungen für die Parameter (A-313)** 77. Jahrestagung der Deutschen Geophysikalischen Gesellschaft Potsdam, March 23 - 27, 2017.
- Mayr S.I., Sviridov V., and Shapiro S.A. (2016) **Druckabhängige seismischen Eigenschaften von Ton- und Sandsteinen: Beschreibung mittels des Porositätsdeformationsansatzes.** In *DGMK/ÖGEW-Frühjahrstagung, "Digitalisierung der Öl-und Gasindustrie"*, Celle, 21./22. April 2016, DGMK-Tagungsbericht 2016-1, ISBN 978-3-941721-64-7, pages 1–9.
- Sviridov V., Mayr S.I., and Shapiro S.A. (2016) **Stress dependency of elastic parameters in shales with different symmetries. VTI versus orthorhombic elastic medium.** In *DGMK/ÖGEW-Frühjahrstagung, "Digitalisierung der Öl-und Gasindustrie"*, Celle, 21./22. April 2016, DGMK-Tagungsbericht 2016-1, ISBN 978-3-941721-64-7, pages 1–7. [6]
- Mayr S., S. Stanchits, G. Dresen, and S. Shapiro (2015) **Fracturing of pre-stressed water saturated sandstone samples by pore-pressure changes**, 26th IUGG 2015 General Assembly.
- Mayr S., Sviridov V., Niemann R., and Shapiro S.A. (2015) **Stress dependency of seismic velocity in anisotropic siliclastic rocks (Spannungsabhängigkeit der seismischen Geschwindigkeit in anisotropen siliklastischen Gesteinen)** DGMK-Research Report 741-1. Hamburg, ISSN 0937-9762.
- V. Sviridov, S. Mayr S., Shapiro (2015) **Comparison of Experimentally Determined and Theoretically Predicted Elastic Properties of VTI Shale under Uniaxial Loading** DGMK/ÖGEW-Frühjahrstagung 2015, Fachbereich Aufsuchung und Gewinnung Celle, 22./23. April 2015; DGMK-Tagungsbericht 2015-1; (Extended Abstract, pp. 1–6)
- Niemann R., Mayr S., S. Shapiro (2015) **Anwendung des Porositäts - Deformations - Ansatzes auf eine vertikal geschichtete Schieferprobe unter triaxialen Spannungsbedingungen**, 75. Jahrestagung der DGG in Hannover vom 23. - 26. März 2015.
- Sviridov V., Mayr S., S. Shapiro (2015) **Comparison of experimentally determined and theoretically predicted elastic properties of VTI shale under uniaxial loading**, 75. Jahrestagung der DGG in Hannover vom 23. - 26. März 2015.
- Mayr S., Sviridov V., S. Shapiro (2015) **Wie verändert anisotrope Spannung die elastischen Eigenschaften transversal isotroper Gesteine? (Influence of anisotropic stress on elastic properties of transversal isotropic rocks)**, 75. Jahrestagung der DGG in Hannover vom 23. - 26. März 2015.
- S. Mayr V. Sviridov, S. Shapiro (2014) **Comparison of p- and s-wave velocities in a transversal isotropic sandstone and a shale under uniaxial loading conditions.** DGMK/ÖGEW-Frühjahrstagung 2014, Fachbereich Aufsuchung und Gewinnung Celle, 24./25. April 2014; DGMK-Tagungsbericht 2014-1, ISBN 978-3-941721-42-5; (extended Abstract)

- Wilhelm, H., Burkhardt, H., Popov, Yu, **Heidinger, P.**, Mayr, S., Romushkevich, R., and Gorobtsov, D. (2011): **The Thermo-hydraulic Regime of the Chesapeake Bay Impact Structure**, GSA Annual Meeting in Minneapolis (9–12 October 2011) .
- Mayr S., S. Stanchits, G. Dresen, and S. Shapiro (2011): **Acoustic Emission induced by pore-pressure pulses in sandstone samples**, GSA Abstract #189498 - FRAGILE EARTH: Geological Processes from Global to Local Scales and Associated Hazards, Munich, 4-7 September, 2011.
- Mayr S., Popov Yu., Romushkevich R., Burkhardt H., Wilhelm H. (2011): **Comparison of Petrophysical Properties of Impactites for four Meteoritic Impact Structures**, GSA Abstract #189383 - FRAGILE EARTH: Geological Processes from Global to Local Scales and Associated Hazards, Munich, 4-7 September, 2011.
- Wilhelm, H., Burkhardt, H., Popov, Yu, Heidinger, P., Mayr, S., Romushkevich, R., and Gorobtsov, D. (2011): **The Thermo-hydraulic Regime of the Chesapeake Bay Impact Structure**, GSA Abstract #189374 - FRAGILE EARTH: Geological Processes from Global to Local Scales and Associated Hazards, Munich, 4-7 September, 2011
- Mayr, S., Burkhardt, H., Popov, Yu., Romushkevich, R., Wilhelm, H. (2011): **Comparison of Petrophysical Properties of Impactites for four Meteoritic Impact Structures**, IODP/ICDP Kolloquium Münster, 14. - 16.03.2011.
- Wilhelm, H., H. Burkhardt, Yu. Popov, P. Heidinger, S. Mayr, R. Romushkevich, D. Miklashevskiy (2011) **Das thermo-hydraulische Regime in der Chesapeake Bay Impaktstruktur**. 71. Jahrestagung der Deutschen Geophysikalischen Gesellschaft, Köln, 21. - 24. 2. 2011
- Stanchits S., S. Mayr, S. Shapiro and G. Dresen (2010): **Fracturing of Dry Porous Rock by Fluid Injection**, 44th U.S. Rock Mechanics Symposium, Salt Lake City, Utah, June 27-30, 2010.
- Stanchits S., S.I. Mayr, S.A. Shapiro and G. Dresen (2009): **Fracturing of porous rocks induced by fluid injection**, Euro-conference of Rock Physics and Geomechanics 2009, Ascona, 11 – 18 September 2009.
- Mayr S.I., S. Stanchits, C. Langenbruch, G. and S.A. Shapiro (2009): **Fracturing of water saturated sandstones by pressure pulse**, Euro-conference of Rock Physics and Geomechanics 2009, Ascona, 11 – 18 September 2009.
- S. Stanchits, G. Dresen, S. Mayr, S. Shapiro. (2008) **Initiation and Activation of Faults in Dry and Wet Rock by Fluid Injection**. EOS Trans. AGU, 89(53), Fall Meet. Suppl., Paper Number: T22A-07 (2008 AGU Fall Meeting, 15-19 December, in San Francisco).
- S. Mayr (2008) **Interpretation der mechanischen und thermischen Eigenschaften verschiedener Bohrkern aus den Chicxulub und Chesapeake Meteoriten Einschlags Kratern**. FKPE Workshop Bohrlochgeophysik, Hannover, 8.-9. Mai 2008 (Vortragsfolien: <http://www.liag-hannover.de/fkpe/arbeitsgruppen/bohrlochgeophysik-und-gesteinsphysik/9-workshop-2008/beitraege.html>).
- Yu. Popov, H. Burkhardt, H. Wilhelm, V. Tertychnyi, R. Romushkevich, S. Mayr, P. Heidinger (2008): **Thermal property measurements in studying heat and mass transfer processes in crust**. EGU assembly, Vienna, Austria 13-18. April 2008.
- Yu. Popov, H. Burkhardt, H. Wilhelm, R. Romushkevich, S. Mayr, P. Heidinger, (2008): **Geothermal investigations in superdeep and deep scientific wells: methods and results**. EGU assembly, Vienna, Austria 13-18. April 2008.
- P. Heidinger, H. Wilhelm, J. Safanda, H. Burkhardt, S. Mayr, Yu. Popov, (2008) **Geothermal investigations from well data of the Chesapeake Peninsula**. IODP/ODP Joint Meeting - Euro-Forum Hannover, 12.-14. March. 2008,.
- S.I. Mayr, Yu. Popov, H. Burkhardt, D.N. Gorobtsov, R.A. Romushkevich. H. Wilhelm, P. Heidinger, (2008): **Physical Rock Properties of the Chesapeake Bay Impact Structure**. IODP/ODP Joint Meeting - Euro-Forum Hannover, 12.-14. March. 2008,.
- Heidinger P, Wilhelm H, Popov Y, Safanda J, Burkhardt H, and Mayr S (2007): **Preliminary results of geothermal investigations in the borehole Eyreville-B, Chesapeake**

Peninsula TOPICAL SESSION, GSA Denver Annual Meeting 2007 (28 - 31 October 2007).

Popov Y, Korobkov D, Romushkevich R, Gorobtsov D, Burkhardt H, Mayr S and Wilhelm H (2007): **Thermal properties of rocks from the borehole Eyreville-B, Chesapeake Peninsula (Preliminary data)** TOPICAL SESSION, GSA Denver Annual Meeting 2007 (28 - 31 October 2007).

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Mayr S, Burkhardt H, Popov Yu, Wilhelm H (2006): **Estimation of hydraulic permeability considering the micromorphology of rocks of the borehole Yax-1 (Impact crater Chicxulub)**. Sixth International Meeting Heat Flow and the structure of the lithosphere. Bykov, 5.-10. June 2006.

Wilhelm H, Popov Yu, Burkhardt H, Šafanda J, Čermák V, Heidinger P, Korobkov D, Romushkevich R and Mayr S (2006): **Heterogeneity effects in thermal borehole measurements in the Chicxulub impact crater**. Sixth International Meeting. Heat Flow and the structure of the lithosphere. Bykov, 5.-10. June 2006.

Kenkmann T, Thoma K, Behner T, Wünnemann K, Reimold W.U, Schmitt R.T, Hecht L, Patzschke M, Deutsch A, Mayr S, Yaramanci U, Grosse C and Dresen G (2006): **Hypervelocity impact in dry and wet sandstone**. EGU general assembly, Vienna, (April 2-7, 2006)

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Mayr S, Burkhardt H, Popov Yu, Wilhelm H (2006): **Petrophysical Investigations within the Chicxulub and Chesapeake Bay Impact Scientific Drilling Projects (CSDP and USGS)**. ICDP-IODP Joint Meeting - Euro-Forum, Greifswald, 27.-29. March 2006.

Thoma, K., Behner, T., Kenkmann, T., Stöffler, D., Schmitt, R.T., Mayr, S. and The Memin-Team, (2005) **Hypervelocity impact experiments of iron projectiles on dry and water-bearing sandstones**. 68th Annual Meteoritical Society Meeting Abs. # 5049.

Mayr S, Burkhardt H, Popov Yu, Romushkevich R, Bayuk I (2005): **Geothermal and Petrophysical Investigations within the Chicxulub Scientific Drilling Project (CSDP) - Physical Properties of Rocks in the Borehole YAX-1**. IODP/ODP Joint Meeting - Euro-Forum Potsdam, 14.-16. March. 2005,.

Mayr S. Burkhardt H (2005) **Abschätzung der Flüssigkeitseffekte auf die seismischen Geschwindigkeiten an Gesteinen der ICDP - Bohrung Yaxopoil-1 (Chicxulub)** DGG-Jahrestagung – Graz, 21.-25. February 2005, .

Mayr S, Burkhardt H, Popov Yu, Romushkevich R, Bayuk I (2004): **Petrophysical Properties of Rocks in the Borehole Yaxopoil-1 (Chicxulub Scientific Drilling Project, CSDP)** (Abstracts). New And Classical Applications Of Heat Flow Studies, 4.-7. Oktober 2004 in Aachen.

Bayuk I, Popov Y, Romushkevich R, Burkhardt H, Mayr S (2004) **Theoretical prediction of rock's thermal conductivity from elasticity data**. Euro-Conference on Rock- Physics and Geomechanics, 20.-23. September 2004 in Potsdam.

Mayr S, Burkhardt H, Popov Yu, Romushkevich R, Bayuk I (2004): **Geothermal and Petrophysical Investigations within the Chicxulub Scientific Drilling Project (CSDP) – Physical Properties of Rocks in the Borehole YAX – 1**. ICDP-IODP Joint Meeting - Euro-Forum, 17-19.3. 2004 in Bremen.

Mayr S, Burkhardt H, Popov Yu, Romushkevich R, Bayuk I (2004): **Interpretation physikalischer Messungen an Gesteinen der Yaxcopoil-1 Bohrung**. - 64. Jahrestagung der Deutschen Geophysikalischen Gesellschaft (S1J), 8.-12.3.2004, Berlin.

- H. Wilhelm, Burkhardt H, Popov Yu, Mayr S, Heidinger P, Romushkevich R, Korobkov D and Bayuk I (2003): **Geothermal and Petrophysical Investigations within the Chicxulub Scientific Drilling Project (CSDP)**, SPP Kolloquium ICDP, Mainz 2003.
- Mayr S, Burkhardt H, Popov Yu, Romushkevich R and Bayuk I (2003): **Interpretation physikalischer Messungen an Kalksteinen des oberen Teils der Yaxcopoil-1 Bohrung (Chicxulub Krater, Mexico)**. - FKPE Arbeitskreis "Bohrlochgeophysik und Gesteinsphysik", 7. Workshop, 23.-24.10.2003 in Hannover.
- Wilhelm H, Burkhardt H, Popov Y, Romushkevich R, Korobkov D, Bayuk I, Heidinger P and Mayr S (2003): **Geothermal and petrophysical investigations within the Chicxulub Scientific Drilling Project (CSDP)**.- Gemeinsames Schwerpunktkolloquium IODP-ICDP, 26.-28.3.2003 in Mainz.
- Popov Y, Romushkevich R, Korobkov D, Bayuk I, Burkhardt H, Mayr S and Wilhelm H (2003): **Thermal properties of rocks from the upper part of the YAXCOPIL well (Chicxulub crater, Mexico)**. - European Geophysical Society-AGU-EUG Joint Assembly, 6.-11.4.2003 in Nice, France.
- Mayr, S., Burkhardt, H. (2001): **Ultraschallmessungen zur Untersuchung der Veränderung der Mikrostruktur von Sandsteinen bei hydrostatischen Druckbedingungen**. - Forschungskollegium Physik des Erdkörpers (FKPE), 6. Workshop Bohrlochgeophysik und Gesteinsphysik.
- Mayr, S., Burkhardt, H. (2001): **Bestimmung des druckabhängigen Verhaltens von Gesteinen mit unterschiedlicher Mikrostruktur durch Ultraschallmessungen**. - 61. Jahrestagung der Deutschen Geophysikalischen Gesellschaft in Frankfurt/Main.
- Mayr, S., Burkhardt, H. (2000): **Untersuchung der Veränderung der Mikrostruktur von Sandsteinen mittels Ultraschallmessungen bei hydrostatischen Drücken bis 200 MPa** (Abstrakt, Poster). - 60. Jahrestagung der Deutschen Geophysikalischen Gesellschaft, 27.2-3.3.2000, München.
- Maier, R. und Mayr S. (1996): **Bestimmung von Aquifereigenschaften durch Messung von Neigungen bei Pumpversuchen**. In: DGG-Mitteilungen, Sonderband, 3. DGG-Seminar Umweltgeophysik, DGG, Münster, pp. 29-35.
- Mayr S. und Maier, R. (1996): **Bestimmung von Elastizitätsmoduln durch Messung von Neigungen bei quasistatischer Belastung**. In: DGG-Mitteilungen, Sonderband, 3. DGG-Seminar Umweltgeophysik, DGG, Münster, pp. 36-42.
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Theses:

- Mayr, S. (2015): **Kombinierte Interpretation petrophysikalischer Eigenschaften von Impaktiten und Postimpaktiten (Combined interpretation of petrophysical properties of Impactites and Postimpactites)**. Habilitationsschrift, eingereicht November 2015 an den Fachbereichsrat der Geowissenschaften (Freien Universität Berlin)
- Mayr, S. (2002): **Der Einfluß der Mikrostruktur auf die Ultraschalleigenschaften von Sandsteinen bei hydrostatischen Druckbedingungen** (The influence of the microstructure on the ultrasonic behaviour of sandstones under hydrostatic pressure). Dissertation, Technische Universität Berlin, pp.167. urn:nbn:de:kobv:83-opus-4712 Electronically via: <http://opus.kobv.de/tuberlin/volltexte/2002/471/>
- Mayr, S. (1993): **Untersuchung des elastischen Verhaltens poröser Lockergesteine bei statischer Belastung** (Investigation of the elastic behaviour of porous sediments at static stress), Diplomarbeit. Institut für Geophysik Universität Stuttgart.