

## **22 Abstracts:**

FERREIRO MÄHLMANN, R. (1991): Paleogeothermal and tectogenetic evolution of the Austroalpine Nappes in the Grisons and Vorarlberg (Switzerland and Austria). A continuous non paroxistic model of the Cretaceous Alpine Orogenesis. - Abstract: IGCP Project 294 meeting, Low Temperature Metamorphism, p. 18, Auckland, New Zealand.

FERREIRO MÄHLMANN, R. (1991): Die Temperaturgeschichte im Unterostalpin und Pennin des Oberhalbsteins und ihre tektonetische Bedeutung (Graubünden, Ostschweiz). - Abstract: Schweiz. geol. Ges., Chur, Switzerland.

FERREIRO MÄHLMANN, R. (1993): Illit-"Kristallinität" und Diagenese-Metamorphose-indikation. DMG Jahrestagung, Berlin - Abstract: Ber. dtsch. mineralog. Ges., **1993/1**, p. 293.

FERREIRO MÄHLMANN, R. (1995): The pattern of diagenesis and metamorphism by vitrinite reflectance and illite-'crystallinity' in Mittelbünden and in the Oberhalbstein (Eastern Switzerland). EUG Strasbourg, France - Terra Abstracts, Terra nova, v. 7, Abstract Supplement 1, p. 127.

FERREIRO MÄHLMANN, R. (1995): Das Diadenese-Metamorphose-Muster in Mittelbünden und im Oberhalbstein. Korrelation kohlenpetrographischer und mineralogischer Parameter mit Vitrinitreflexions-Thermometern. - Abstract: 12. Schweiz. Tektonikertreffen, Fribourg, Switzerland.

FERREIRO MÄHLMANN, R. (1995): Coal petrographic and mineralogical determination of the pattern of diagenesis and metamorphism, Mittelbünden and Oberhalbstein, Switzerland. DMG Strasbourg, France - Abstract: Ber. dtsch. mineralog. Ges., **1995/1**, p. 63.

FERREIRO MÄHLMANN, R. (1996): Vitrinite paleogeothermometers: Comparative application and time-temperature modeling in the Alpine orogen (Graubünden, Switzerland). -

Abstract: Metamorphic Studies Group-meeting: 'What drives metamorphism and metamorphic reactions', Kingston upon Thames.

Abstract: MinPet. 96, SMPG-ÖMG Jahrestagung, Schwaz, Österreich - Mitt. österreich. mineralog. Ges., v. **141**, p. 83-84.

FERREIRO MÄHLMANN, R. (1997): Coal petrological and mineralogical low temperature indicators and maturity modeling: Comparative application from diagenesis to low greenschist and blueschist facies. DMG Köln, Germany - Abstract: Ber. dtsch. mineralog. Ges., **1996/1**, p. 101.

FERREIRO MÄHLMANN, R. (1998): Das Diadenese-Metamorphose-Muster in Mittelbünden und im Oberhalbstein: Geochronologie und Metamorphosegeschichte. EUG Strasbourg, France – Abstract: Terra Nostra, v. **98/1**, p. 46-47.

FERREIRO MÄHLMANN, R. (1998): Das Diadenese-Metamorphose-Muster in Mittelbünden, Geochronologie und Metamorphosegeschichte.

Abstract: 15. Schweiz. Tektonikertreffen, Bern, Switzerland.

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FERREIRO MÄHLMANN, R. (1999): Permo-Triassic diastothermal metamorphism in the Austroalpine basement and its sedimentary cover units. EUG 10 Strasbourg, France - Terra Abstracts: J. of Conference Abstracts, v. **4/1**, p. 297-298.

FERREIRO MÄHLMANN, R. (2000): The tectono-metamorphic evolution of the Lower Austroalpine in the Oberhalbstein (Switzerland): very low grade metamorphic data combined with a thermal maturity modeling approach. TSK, Freiburg i.Br., Germany – Abstract: 8. Symposium “Tektonik, Struktur- und Kristallingeologie”, p. 16, 4.-6. Oktober,

FERREIRO MÄHLMANN, R. (2010): Coal and clay-mineral very low- to low-temperature indicators, comparative application from diagenesis to green- and blueschist facies. – Abstract: SEA-CSSJ-CMS, Trilateral Meeting on Clays, TMC 6. – 11. June, Madrid-Sevilla, Spain, Clay Minerals Society.

FERREIRO MÄHLMANN, R. (2011): Dewatering path-ways during orogenic metamorphism in a diagenetic/very low-grade tectonic-metamorphic mélange (Arosa zone, Eastern Switzerland). Poster presentation, EUROCLAY 26 June – 01 July, Second Frey-Kübler Symposium, Antalya, Turkey.

FERREIRO MÄHLMANN, R. (2011): Thermo-barometric use of coal and clay-mineral indicators, comparative application from diagenesis to sub-greenschist and sub-blueschist facias. EUROCLAY 26 June – 01 July, Second Frey-Kübler Symposium, **Invited Plenary Lecture**, Antalya, Turkey.

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FERREIRO MÄHLMANN, R. (2013): Standardisation, calibration and correlation of the Kübler-Index and the vitrinite/bituminite reflectance: an inter-laboratory and field related study. Swiss Geoscience Meeting 15<sup>th</sup> – 16<sup>th</sup> November, University Lausanne.

FERREIRO MÄHLMANN, R. (2014): Dewatering path-ways evidenced by clay minerals in a diagenetic/very low-grade tectono-metamorphic mélange (Arosa zone, Eastern Switzerland). Session 5: Clay minerals in diagenetic and low temperature metamorphic environments. VLG-T09, p. 119, Mid-European Clay Conference (MECC), 16<sup>th</sup> – 19<sup>th</sup> September, Dresden, Germany,.

FERREIRO MÄHLMANN, R. (2015): Applying different clay mineral and organic matter indices to determine rock maturity and grade of diagenesis to incipient metamorphism focused on correlation problems. Third Frey-Kübler symposium: Clay mineral indices in palaeo-geothermal studies, hydrocarbon and geothermal prospection, Abstract Book, p. 123, EUROCLAY, 7<sup>th</sup> July, Edinburgh, Scotland UK.

FERREIRO MÄHLMANN, R. (2018): Preliminary attempt to define grade of diagenesis and incipient metamorphism considering geothermal gradients calibrated with clay mineral, mineral and maceral index data. Session E: Clay (and associated) minerals in geological systems. Abstract Book, p. 43, Mid-European Clay Conference 09 (MECC), 17-21 September, **Invited Keynote Lecture**, Zagreb, Croatia,,

## **26 Abstracts mit Mitarbeitern:**

- FERREIRO MÄHLMANN, R., PETSCHICK, R., ERDELBROCK, K., WOLF, M., KRUMM, H., BERNOULLI, D., FREY, M. & JÄGER, E. (1991): A coalification map of the Central Alps. – Appenzell, St. Gallen, Glarus, Graubünden, Vorarlberg and Tyrol (Switzerland, Liechtenstein and Austria). Poster presentation – Abstract Schweiz. geol. Ges., Chur. Also presented as: KRUMM, H., FERREIRO MÄHLMANN, R., PETSCHICK, R., ERDELBROCK, K., WOLF, M., BERNOULLI, D., FREY, M. & JÄGER, E. (1991), Poster presentation at the IGCP Project 294 meeting, Low Temperature Metamorphism, p. 28, Auckland.
- FERREIRO MÄHLMANN, R., PETSCHICK, R. & KRUMM, H. (1991): Diagenesis to low grade metamorphism in Tyrol, Vorarlberg and Grisons (Austria and Switzerland) - new maps. Poster presentation at EUG Strasbourg, France - Terra Abstracts, v. **3**/1, p. 105.
- FERREIRO MÄHLMANN, R., PETSCHICK, R., ERDELBROCK, K., KRUMM, H., WOLF, M. & BERNOULLI, D. (1992): Coalification map of the Pennine-Austroalpine-Boundary (Switzerland, Liechtenstein and Austria). Poster presentation at ALCAPA meeting, Graz, Austria, 1 - 3 July - Terra abstracts, Terra Nova, v. **4**, Abstract Supplement 2, p. 2.
- FERREIRO MÄHLMANN, R., KRUMM, H., WOLF, M., BERNOULLI, D. & JÄGER, E. (1993): Polyphase Metamorphose und ihre zeitliche Einordnung im Grenzbereich West-/Ostalpen. Poster presentation at DMG Jahrestagung, Berlin – Abstract: Ber. dtsch. mineralog. Ges., **1993**/1, p. 250.
- FERREIRO MÄHLMANN, R. & PETSCHICK, R. (1993): Probenaufbereitung für die Illit- "Kristallinitäts"-Untersuchungen und Altersdatierungen an Illitfraktionen sowie Eichungen und Ringuntersuchungen zur Illit- "Kristallinität". - Unpubl. Manuskr.: Bibl. Inst. für Geochemie, Petrologie und Lagerstättenkunde, Univ. Frankfurt am Mai (open file report).
- FERREIRO MÄHLMANN, R., GIGER, M. & FLISCH, M. (1993): Der Nachweis der "Tscherpen-Dorfbergdecke" in der alpinen Suturzone mit radiometrischen Glimmer- und Illit-Altern, Spaltpuren-Altern, der Illit- "Kristallinität", und der Inkohlungsbestimmung. DMG Jahrestagung, Berlin - Abstract: Ber. dtsch. mineralog. Ges., **1993**/1, p. 125.
- FERREIRO MÄHLMANN, R. & PETSCHICK, R. (1996): Illit- "Kristallinität", Vitrinitreflexion und Maturitäts-Modellierungen: Tektonische Fallstudien aus der Lechtal- und Silvretta Decke. TSK, Salzburg, Austria - Abstract: 6. Symposium Tektonik-Strukturgeologie-Kristallingeologie, Facultas Universitätsverlag, Salzburg, p. 112-115.
- FERREIRO MÄHLMANN, R. & PETSCHICK, R. (1996): The coalification map of the Alps between the rivers Inn, Isar and Rhein (Austria and Switzerland): thermo-tectonic relations. Poster presentations:  
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- FERREIRO MÄHLMANN, R. & PETSCHICK, R. (1997): The coalification map of the Alps between the rivers Inn, Isar and Rhein (Austria and Switzerland): thermo-tectonic relations. Poster presentation at EUG Strasbourg, France - Terra Abstracts: Terra nova, v. **9**, Abstract Supplement, No. 1, p. 576.

FERREIRO MÄHLMANN, R., GIGER, M. & FLISCH, M. (1998): Vergleichende Untersuchungen von Glimmer-, Illit- und Spaltspurenaltern mit Methoden zur Bestimmung niedriggradiger Metamorphose im Bereich der Arosa Zone Mélange in Graubünden (Schweiz). DMG-DGG Jahrestagung, Geo-Berlin'98, Germany – Abstract: Ber. dtsch. mineralog. Ges., **1998**/1, p. 88.

FERREIRO MÄHLMANN, R., BELMAR, M. & CIULAVU, M., (2001): Bituminite reflectance in very low grade metamorphic studies. Terra Abstracts: J. of Conference Abstracts, EUG 11, FMF1, Diagenesis and Low-Grade Metamorphism, v. **6/1**, p. 230. **Invited Keynote Lecture**, Strasbourg, France.

FERREIRO MÄHLMANN, R., BELMAR, M., CIULAVU, M., DALLA TORRE, M., PETROVA, T., POTEL, S., SCHMIDT, D., ZIMMERMANN, B., BARRENECHEA, J. & ERNST, G.W. (2002): Anwendungsmöglichkeiten der Bituminitreflexion zur Erkennung mehrphasiger, niedriggradiger Metamorphosen: Tektono-metamorphe und genetische Folgerungen. TSK, Erlangen, Germany - Abstract: 9. Symposium: “Tektonik, Struktur- und Kristallingeologie”.

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FERREIRO MÄHLMANN, R. & ERNST, G.W. (2003): Laboratory study of vitrinite maturation rate as a function of temperature, time, starting material, aqueous fluid pressure, and oxygen fugacity — Corroboration of prior work. EUG, Nice, France – Abstract: Geophysical Research Abstracts, Vol. 5, 04413, EGU Nice 2003.

FERREIRO MÄHLMANN, R. & GIGER, M. (2005): Tectono-thermal history of the Penninic-Austroalpine boundary (Arosa zone, Eastern Switzerland). Abstract: Arbeitstagung der Geologischen Bundesanstalt, Gmünd, Kärnten, Austria.

FERREIRO MÄHLMANN, R. & GIGER, M. (2010): The Arosa zone in Eastern Switzerland, the diagenetic to metamorphic pattern of a tectono-metamorphic mélange. MECC, Budapest, Hungary – Abstract: Mid-European Clay Conference, Eötvös Loránd University, Budapest.

FERREIRO MÄHLMANN, R., BOZKAYA, Ö., POTEL, S., LE BAYON, R., ŠEGVIĆ B. & NIETO GARCÍA, F. (2012): The pioneer work of Bernard Kübler and Martin Frey in very low-grade metamorphic terranes: Paleo-geothermal potential of variation in Kübler-Index/ organic matter reflectance correlations – a review. Swiss Geoscience Meeting 16<sup>th</sup> – 17<sup>th</sup> November 2012, University Bern.

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FERREIRO MÄHLMANN, R. & LE BAYON, R. (2014). Correlation of vitrinite like bituminite reflectance with vitrinite reflectance in various geological settings: A tool for determining organic matter maturation level. Session A09: Organic petrology, organic geochemistry and mineralogy in basic research and applied geosciences. GeoFrankfurt 2014, Goethe University, Frankfurt am Main, Germany.

FERREIRO MÄHLMANN, R., WOLF, W., BERNOULLI, D., PETSCHICK, R., MEISTER, P., MULLIS, J. & KRUMM, H. (2015): Traces of burial Permo-Triassic and Jurassic heating discriminated from the Cretaceous Upper-Austroalpine orogenetic diagenetic-metamorphic

pattern by organic matter studies and maturity modelling (Mittelbünden, Switzerland). 67th Annual Meeting of the International Committee for Coal and Organic Petrology (ICCP). Schriftenreihe der Deutschen Gesellschaft für Geowissenschaften, Heft 87, p. 51–52.

FERREIRO MÄLmann, R., WOLF, W., BERNOULLI, D., PETSCHICK, R., MEISTER, P., MULLIS, J., GIGER, M. & KRUMM, H. (2017): Traces of Permian to Jurassic burial discriminated from the Cretaceous orogenetic metamorphic pattern (Upper-Austroalpine, Graubünden, Switzerland). Session: MI-03 Clay mineral reaction progress in very low-grade temperature petrologic studies. AIPEA XVI International Clay Conference (ICC), 17-21 July, Granada, Spain.

FERREIRO MÄLmann, R., POTEI, S., NGUYEN-THANH, L., PETSCHICK, R. & RAHN, M. (2019): Determination of a normal palaeo-geothermal gradient comparing the reaction progress of clay minerals calibrated with organic maturity indices. Dedicated to the 90<sup>th</sup> birthday of Hans Krumm. Session B7: Diagenesis and Low- Grade Metamorphism (4<sup>th</sup> Frey-Kübler Symposium), Abstract Book, p. 242, International Conference on Clay Science and Technology, EUROCLAY, 1-5 July, Paris, France.

FERREIRO MÄLmann, R., NGUYEN-THANH, L., RAHN M., POTEI, S. & PETSCHICK, R. (2022): Clay mineral paragenesis changes along an orogenic normal geothermal gradient. Thematic Session 27 - Clay mineral reaction progress during burial diagenesis and very low-temperature metamorphism. AIPEA XVII International Clay Conference (ICC), 25-29 July, Istanbul, Turcay.

FERREIRO MÄLmann, R. & POTEI, S. (2022): Illite  $b_0$  lattice indices and pressure constraints in normal geothermal gradient settings. Thematic Session 26 - Clay minerals studies in sedimentary basins predicting geotherms, fluid- and hydrocarbon migration systems. AIPEA XVII International Clay Conference (ICC), 25-29 July, Istanbul, Turcay.

## **51 Abstracts, beteiligt als Koautor** (alphabetisch; unterstrichen: Vortrag gehalten):

ARAQUE GONZALEZ, R., ASMUS, B., BAPTISTA, P., CLAMOTE, V., FERREIRO MÄLmann, R., KAISER, M., OSÓRIO, M., PANIEGO DÍAZ, P., RICHTER, A., VINTRICI, G. (2022): El Primer Hierro en la Península Ibérica y sus Relaciones con la Elaboración de las Estelas del Suroeste. EIVISSA 2022 10th International Congress of Phoenician and Punic Studies, X Congreso Internacional de Estudios Fenicios y Púnicos, Octubre 17 – 21 de 2022, Santa Eulària des Riu, Isla de Ibiza.

ARAQUE GONZALEZ, R., ARMADA PÍTA, X.L., ASMUS, B., BAPTISTA, P., CLAMOTE, V., FERREIRO MÄLmann, R., KAISER, M., OSÓRIO, M., PANIEGO DÍAZ, P., RICHTER, A., VINTRICI, G. (2022): The Protohistoric Warrior Stelae and the Oldest Iron Chisels of the Iberian Peninsula. International Cobgress of Experimental Archaeology CONEXP 2022, 25-28.10.22.

BELMAR, M., SCHMIDT, S.Th., FREY, M., FERREIRO MÄLmann, R & MULLIS, J. (2001): Low-Grade and Contact Metamorphism in Volcanic and Volcaniclastic Successions, Río Tinguiririca Valley, Central Andes of Chile. – Terra Abstracts, J. of Conference Abstracts, EUG 11, FMF1, Diagenesis and Low-Grade Metamorphism, v. 6/1, p. 238.

BOZKAYA, Ö., FERREIRO MÄLmann, R., YALÇIN, H. & GÖNCÜOGLU, M.C. (2017). Organic matter reflectance and clay mineralogical evidences for orogenic events: Example from

very low-grade metamorphic sequences in southern and north-western Turkey. Session MI-03: Clay mineral reaction progress in very low-grade temperature petrologic studies. XVI International Clay Conference (ICC), 17-21 July, Granada, Spain.

BOZKAYA, Ö., YALÇIN, H., UYSAL, I.T., GÖNCÜOGLU, M.C., FERREIRO MÄHLMANN, R. & OKUYUCU, C. (2018). Illitization age data on pre-Alpine geological events: an example from the autochthonous Paleozoic sequence, Tauride Belt, Southern Turkey. Session E: Clay (and associated) minerals in geological systems. Abstract Book, p. 25, Mid-European Clay Conference 09 (MECC), 17-21 September, Zagreb, Croatia.

CHARRIER, M.E., NGUYEN-TANH, L., BAULUZ, B., HOANG-MINH, T., RAINER PETSCHICK, R. & FERREIRO MÄHLMANN, R. (2019): Mineralogical Alteration of Fe-smectite in High Alkaline Solutions. Session A2: Experimental and numerical analysis of clay systems: bridging time and length scales, Abstract Book, p. 472, International Conference on Clay Science and Technology, EUROCLAY, 1-5 July, Paris, France.

CIULAVU, M. & FERREIRO MÄHLMANN, R. (1999): The Alpine metamorphic pattern in the Danubian Window, South Carpathians (Romania). – Terra Abstracts, J. of Conference Abstracts, EUG 10, v. 4/1, p. 781.

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DALLA TORRE, M., FERREIRO MÄHLMANN, R. & ERNST, W.G. (1996): Pressure dependance of the maturation rate of organic matter. - Abstract: p. 14. Schweiz. Tektonikertreffen, Basel.

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LE BAYON, R. & FERREIRO MÄHLMANN, R. (2011): Experimental investigations on vitrinite reflectance: Toward a tool to model maturation and metamorphic conditions in low temperature metasedimentary terranes. Abstract: GV – DGG – GSA 2011, München, Germany.

MAISON, T., POTEL, S., MALIE, P., FERREIRO MÄHLMANN, R., CHANIER, F., MAHIEUX, G. & BAILLEUL, J. (2018): Low-grade evolution of clay minerals and organic matter in fault zones of the Hikurangi prism (New Zealand). Session 2.5: De l' arrière – à l' avant – arc: tectonique et sédimentation des zones de subduction. 26. Réunion des Sciences de la Terre (RST), p. 282, 22<sup>th</sup> - 26<sup>th</sup> October 2017, Lille, France.

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MALIE, P., BAILLEUL, J., CHANIER, F., POTEL, S., MAHIEUX, G., TOULLEC, R. & FERREIRO MÄHLMANN, R. (2018): Intervenant fossil plumbing system of oil and gas hydrocarbon seepage – impact on the shallow fluid migration system of the Hikurangi prism (North Island, New Zealand). Session 1.5: Cycles sédimentaires et cycles tectoniques. Les

figures d'expulsion , marqueurs et traceurs des circulations de fluides en sub-surface dans les bassins sédimentaires. 26. Réunion des Sciences de la Terre (RST), p. 109, 22<sup>th</sup> - 26<sup>th</sup> October 2017, Lille, France.

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MALIE, P., FERREIRO MÄHLMANN, R., POTEL, S., MAISON, T., CHANIER, F., MAHIEUX, G. & BAILLEUL, J. (2019): Low grade metamorphic study to precise the geodynamic history and hydrocarbon migration system of the Hikurangi prism (North Island, New Zealand). Session B7: Diagenesis and Low-Grade Metamorphism (4<sup>th</sup> Frey-Kübler Symposium), Abstract book, p. 412, International Conference on Clay Science and tTechnology, EUROCLAY, 1<sup>st</sup> - 5<sup>th</sup> July, Paris, France.

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