

Jan Środoń

LIST OF PROFESSIONAL PUBLICATIONS

- Środoń J. (1972) Mineralogy of coal-tonstein and K-bentonite from coal-seam no. 610, Bytom Trough (Upper Silesian Coal Basin, Poland). Bull. Acad. Polon. Sci., Ser. Sci. de la Terre 20, 155-164.
- Środoń J. (1972) Comparative study of K-bentonite and coal-tonstein from the Upper Silesian Coal Basin, Poland. Bull. Acad. Polon. Sci., Ser. Sci. de la Terre 20, 165-173.
- Kubisz J. i Środoń J. (1973) Studium mineralogiczno-petrograficzne skał poziomu bentonitowego z niecki bytomskiej. Prace Miner. 41, 52 pp. (*in Polish*).
- Parachoniak W. and Środoń J. (1974) The formation of kaolinite, montmorillonite, and mixed-layer montmorillonite-illite during the alteration of Carboniferous tuff (the Upper Silesian Coal Basin). Mineralogia Polonica 4, 37-56.
- Środoń J. (1974) An interpretation of climbing-ripple cross-lamination. Ann. Soc. Geol. Pol. 44, 449-473.
- Środoń J. (1976) Mixed-layer smectite/illites in the bentonites and tonsteins of the Upper Silesian Coal Basin. Prace Miner. 49, 84 pp.
- Stoch L., Bahranowski K., Gątarz Z. i Środoń J. (1977) Charakterystyka mineralogiczna ilów nadkładowych złoża siarki koło Tarnobrzega. Kwart. Geol. 21, 291-309 (*in Polish*).
- Pawełczyk J. i Środoń J. (1978) Rentgenograficzna analiza ilościowa składu mineralnego skał ilastycznych. Materiały I Krajowej Konferencji Ilastej, 211-220 (*in Polish*).
- Środoń J. (1979) Correlation between coal and clay diagenesis in the Carboniferous of the Upper Silesian Coal Basin. Proc. VI Int. Clay Conf., Oxford 1978, 251-260.
- Środoń J. (1980) Precise identification of illite/smectite interstratifications by X-ray powder diffraction. Clays & Clay Minerals 28, 401-411.
- Środoń J. (1980) Synthesis of mixed-layer kaolinite/smectite. Clays & Clay Minerals 28, 419-424.
- Środoń J. and Eberl D. D. (1980) The presentation of X-ray data for clay minerals. Clay Miner. 15, 317-320.
- Środoń J. (1981) X-ray identification of randomly interstratified illite/smectite in mixtures with discrete illite. Clay Miner. 16, 297-304.
- Środoń J. (1984) X-ray powder diffraction identification of illitic materials. Clays & Clay Minerals 32, 337-349.
- Środoń J. (1984) Illite/smectite in low-temperature diagenesis: data from the Miocene of the Carpathian Foredeep. Clay Miner. 19, 205-215.
- Środoń J. and Eberl D. D. (1984) Illite. In: S.W.Bailey, ed. Micas. Reviews in Mineralogy 13, Mineralogical Society of America, 495-544.
- Środoń J. (1985) Clay minerals in diagenesis. Geologic Aspects of Clays in the Petroleum Industry. Univ. of Colorado at Denver. Pp. 39-44.
- Środoń J., Morgan D. J., Eslinger E. V., Eberl D. D. and Karlinger M. R. (1986) Chemistry of illite/smectite and end-member illite. Clays & Clay Minerals 34, 368-378.

- Eberl D. D., Środoń J. and Northrop H. R. (1986) Potassium fixation in smectite by wetting and drying. In: J.A. Davis and K.F. Hayes, eds. Geochemical Processes at Mineral Surfaces, American Chemical Society Symposium Series 323, 296-326.
- Eberl D. D., Środoń J., Lee M., Nadeau P. H. and Northrop H. R. (1987) Sericite from the Silverton caldera, Colorado: Correlation among structure, composition, origin, and particle thickness. Am. Mineral. 72, 914-934.
- Eberl D. D., Środoń J., Lee M. and Nadeau P. H. (1988) A reply to comments on “Sericite from the Silverton caldera, Colorado: Correlation among structure, composition, origin, and particle thickness”. Am. Mineral. 73, 1475-1477.
- Eberl D. D. and Środoń J. (1988) Ostwald ripening and interparticle-diffraction effects for illite crystals. Am. Mineral. 73, 1335-1345.
- Środoń J. i Gaweł A. (1988) Identyfikacja rentgenograficzna mieszanopakietowych krzemianów warstwowych. In: A. Bolewski and W. Żabiński, eds. Metody Badań Minerałów i Skał, Wydawnictwa Geologiczne, 290-307 (*in Polish*).
- Eberl D. D., Środoń J., Kralik M., Taylor B. E. and Peterman Z. E. (1990) Ostwald ripening of clays and metamorphic minerals. Science 248, 474-477.
- Środoń J., Andreoli C., Elsass F. and Robert M. (1990) Direct HRTEM measurement of expandability of mixed-layer illite/smectite in bentonite rock. Clays & Clay Minerals 38, 373-379.
- Środoń J. (1990) Illite/smectite in the rock cycle. In: J.L. Perez-Rodriguez and E. Galan, eds., Lectures VI Meeting European Clay Groups, Sevilla, 1987, 137-151.
- Sucha V., Środoń J., Zatklikova V. and Francú J. (1991) Zmiesanovrstevnatý mineral typu illit/smektyt: separacia, identifikacia, využitie. Min. Slovaca 23, 267-274 (*in Slovak*).
- Środoń J., Elsass F., McHardy W. J. and Morgan D. J. (1992) Chemistry of illite/smectite inferred from TEM measurements of fundamental particles. Clay Minerals 27, 137-158.
- Środoń J. and Elsass F. (1994) Effect of the shape of fundamental particles on XRD characteristics of illitic minerals. Europ. J. Mineral. 6, 113-122.
- Środoń J. (1995) Reconstruction of maximum paleotemperatures at present erosional surface of the Upper Silesia Basin, based on the composition of illite/smectite in shales. Studia Geol. Pol. 108, 9-22.
- Środoń J. (1996) Clay minerals in diagenetic processes. Przegląd Geologiczny 44, 604-607 (*in Polish*).
- Eberl D. D., Drits V., Środoń J. and Nuesch R. (1996) MUDMASTER: A program for calculating crystallite size distributions and strain from the shapes of X-ray diffraction peaks. U.S. Geological Survey Open-File Report 96-171, 45 pp.
- Godzik B., Grodzińska K., Kiszka J., Krywult M., Kwadrans J., Laskowski R., Maryański M., Niklińska N., Szarek-Łukaszewska G., Środoń J., Braniewski S., Budziakowska E., Chrzanowska E. i Pawłowska B., (1996) Ocena stanu i procesów zachodzących w lasach zlewni potoku Ratanica (Pogórze Wielickie, Polska południowa) - Environmental assesment and biochemistry of a moderately polluted catchment (southern Poland). Grodzińska K. and Laskowski R. (eds.), Państwowa Inspekcja Ochrony Środowiska, Warszawa (*in Polish*).

- Šucha V., Środoń J., Elsass F. and McHardy W.J. (1996) Particle shape versus coherent scattering domain of illite/smectite: evidence from HRTEM of Dolna Ves clays. *Clays & Clay Minerals* 44: 665-671.
- Dudek T. and Środoń J. (1996) Identification of illite/smectite by X-ray powder diffraction taking into account the lognormal distribution of crystal thickness. *Geologica Carpathica-Series Clays* 5, 21-32.
- Środoń J. (1997) Dating of diagenetic processes by K-Ar technique. *Nafta - Gaz* 2, 50-52 (*in Polish*).
- Clauer N., Środoń J., Franců J. and Šucha V. (1997) K-Ar dating of illite fundamental particles separated from illite-smectite. *Clay Minerals* 32, 181-196.
- Elsass F., Środoń J. and Robert M. (1997) Illite-smectite alteration and accompanying reactions in a Pennsylvanian underclay studied by TEM. *Clays & Clay Minerals* 45, 390-403.
- Drits V., Środoń J. and Eberl D.D. (1997) XRD measurement of mean crystallite thickness of illite and illite/smectite: reappraisal of the Kubler index and the Scherrer equation. *Clays & Clay Minerals* 45, 461-475.
- Banaś M., Środoń J. and Clauer N. (1997) Thermal history of the Upper Silesia Coal Basin constrained by K-Ar dating of illite/smectite from pyroclastic horizons. *Sbornik II Seminare Ceske Tektonicke Skupiny, Ostrava*, 1977, pp. 4-8.
- Drits V., Eberl D.D. and Środoń J. (1998) XRD measurement of mean thickness, thickness distribution and strain for illite and illite/smectite crystallites by the Bertaut-Warren-Averbach technique. *Clays & Clay Minerals* 46, 38-50.
- Eberl D.D., Drits V., and Środoń J. (1998) Deducing growth mechanisms for minerals from the shapes of crystal size distributions. *Am. J. Sci.* 298, 499-533.
- Środoń J. (1999) Use of clay minerals in reconstructing geological processes: current advances and some perspectives. *Clay Minerals* 34, 27-37.
- Chaudhuri S., Środoń J. and Clauer N. (1999) K-Ar dating of the illitic fractions of Estonian "blue clay" treated with alkylammonium cations. *Clays & Clay Minerals* 47, 96-102.
- Kawiak T., Ossowski A., Paszkowski M., Środoń J. i Zorski T. (1999) Skład mineralny utworów miocenu przedgorza Karpat a ich parametry jadrowe. Materiały Konferencji "Geologia-Geofizyka-Geochemia: Techniki Integracji dla Poszukiwan Naftowych". Biuro Geologiczne „Geonafta”, Warszawa 18 maja 1999, 55-64 (*in Polish*).
- Środoń J. (1999) Extracting K-Ar ages from shales: a theoretical test. *Clay Minerals* 33, 375-378.
- Środoń J. (1999) Nature of mixed-layer clays and mechanisms of their formation and alteration. *Annual Rev. Earth Planet. Sci.* 27, 19-53.
- Rajec P., Šucha V., Eberl D.D., Środoń J. and Elsass F. (1999) Effect of illite particle shape on cesium sorption. *Clays & Clay Minerals* 47, 755-760.
- Środoń J., Drits V.A. McCarty D.K., Hsieh J.C.C. and Eberl D.D. (1999) Quantitative mineral analysis by powder X-ray diffraction from random preparations. Texaco Upstream Technology, Report 99-0134, 43 pp.

- Kotarba M. and Środoń J. (2000) Diagenetic evolution of crystallite thickness distribution of illitic material in Carpathian flysh shales studied by Bertaut-Warren-Averbach XRD method (MudMaster computer program). *Clay Minerals* 35, 387-395.
- Mystkowski K., Środoń J. and Elsass F. (2000) Mean thickness and thickness distribution of smectite crystallites. *Clay Minerals* 35, 545-557.
- Środoń J. (2000) Reply to discussion of “Extracting K-Ar ages from shales: a theoretical test”. *Clay Minerals* 35, 605-608.
- Środoń J., Eberl D.D. and Drits V.A. (2000) Evolution of fundamental-particle size during illitization of smectite and implications for reaction mechanism. *Clays & Clay Minerals* 48, 446-458.
- Zorski T., Pałka K. i Środoń J. (2000) Geofizyczne i mineralogiczne aspekty identyfikacji składu mineralnego w cienkowarstwowych kompleksach piaszczysto-ilastych na podstawie jądrowych profilowań otworów. Materiały Konferencji GEOPETROL 2000, Zakopane 25-28.09.2000, Prace Instytutu Górnictwa Naftowego i Gazownictwa 110, 265-269 (*in Polish*).
- Eberl D.D., Drits V.A. and Środoń J. (2000) GALOPER: a computer program for simulating the shapes of crystal size distributions, with associated programs. U.S. Geological Survey Open-File Report 00-505, 38 pp.
- Eberl D. D., Drits V. and Środoń J. (2000) User's guide to GALOPER – a program for simulating the shapes of crystal size distributions – and associated programs. U.S. Geological Survey Open-File Report 00-505, 51 pp.
- Środoń J. and Clauer N. (2001) Diagenetic history of Lower Paleozoic sediments in Pomerania (northern Poland) traced across the Teisseyre-Tornquist tectonic zone using mixed-layer illite-smectite. *Clay Minerals* 36, 15-27.
- Šucha V., Środoń J., Clauer N., Elsass F., Eberl D.D., Kraus I., and Madejova J. (2001) Weathering of smectite and illite-smectite in Central-European temperate climatic conditions. *Clay Minerals* 36, 403-419.
- Środoń J., Drits V.A., McCarty D.K., Hsieh J.C.C., and Eberl D.D. (2001) Quantitative XRD analysis of clay-rich rocks from random preparations. *Clays & Clay Minerals* 49, 514-528.
- Środoń J., Clauer N. and Eberl D.D. (2002) Interpretation of K-Ar dates of illitic clays from sedimentary rocks aided by modelling. *Am. Mineral.* 87, 1528-1535.
- Dudek T., Środoń J., Eberl D.D., Elsass F. and Uhlik P. (2002) Thickness distribution of illite crystals in shales. I: X ray diffraction vs. high resolution transmission electron microscopy measurements. *Clays & Clay Minerals* 50, 562-577.
- Mystkowski K., Środoń J. & McCarty D.K. (2002) Application of evolutionary programming to automatic XRD quantitative analysis of clay-bearing rocks. Abstracts with Programs, The Clay Minerals Society 39th Annual Meeting, Boulder, CO., p. 134.
- Środoń J. (2002) Quantitative mineralogy of sedimentary rocks with emphasis on clays and with applications to K-Ar dating. *Mineral. Mag.* 66, 677-687.
- Środoń J. (2003) Illite group clays. In: G. Middleton, ed. *Encyclopedia of Sediments and Sedimentary Rocks*. Kluwer Academic Publishers, 369-371.

- Środoń J. (2003) Mixed-layer clays. In: G. Middleton, ed. Encyclopedia of Sediments and Sedimentary Rocks. Kluwer Academic Publishers, 447-450.
- Dudek T. and Środoń J. (2003) Thickness distribution of illite crystals in shales. II: Origin of the distribution and the mechanism of smectite illitization in shales. *Clays & Clay Minerals* 51, 529-542.
- Eberl D. D., Środoń J., and Drits V. A. (2003) Comment on “Evaluation of X-ray diffraction methods for determining the crystal growth mechanisms of clay minerals in mudstones, shales and slates” by L. N. Warr and D. R. Peacor. *Schweiz. Mineral. Petrogr. Mitt.* 83, 349-358.
- Świerczewska A., Dudek T. Środoń J., Malata T. (2003) Zapis historii tektonicznej płaszczyzny skolskiej w diagenezie minerałów ilastych. VI Karpackie Warsztaty Tektoniczne, 37-39.
- Zviagina B.B., McCarty D.K., Środoń J. and Drits V.A. (2004) Interpretation of infrared spectra of dioctahedral smectites in the region of OH-stretching vibrations. *Clays & Clay Minerals* 52, 399-410.
- Clauer N., Rousset D. and Środoń J. (2004) Modeled shale and sandstone burial diagenesis based on the K-Ar systematics of illite-type fundamental particles. *Clays & Clay Minerals* 52, 576-588.
- Środoń J. (2004) Badania stopnia przeobrażenia termicznego minerałów mieszanopakietowych illit-smektyt. W: B. Kępińska, red. Badania warunków termicznych podhalańskiego systemu geotermalnego przy zastosowaniu nowej metody oksyreaktywnej analizy termicznej (OTA) i metod mineralogicznych. Wydawnictwo IGSMiE PAN, Kraków, 80-87 (*in Polish*).
- Środoń J. (2004) Illite, by Alain Meunier and Bruce Velde. *Clays & Clay Minerals* 52, 792-795.
- Środoń J., Kotarba M., Clauer N. and Wójtowicz A. (2005) Diagenetic history of Podhale basin and the sedimentary cover of the Tatras. *Prace Specjalne PTMin.* 25, 372-375.
- Anczkiewicz A.A., Zattin M. and Środoń J. (2005) Cenozoic uplift of the Tatras and Podhale basin from the perspective of the apatite fission track analyses. *Prace Specjalne PTMin.* 25, 261-264.
- Cieszkowski, M., Środoń, J., Waśkowska-Oliwa, A., Leśniak, T. (2006) Bentonitized tuffites in the Lower Eocene deposits of the Subsilesian Unit (Western Outer Carpathians, Poland): lithology, stratigraphic position and mineral composition. *Annales Societatis Geologorum Poloniae* 76, 197-214.
- Środoń J. (2006) Identification and Quantitative Analysis of Clay Minerals. Chapter 12.4 in: F. Bergaya, B.K.G. Theng and G. Lagaly, eds. *Handbook of Clay Science*, Elsevier.
- Środoń J., Clauer N., Banaś M. and Wójtowicz A. (2006) K-Ar evidence for a Mesozoic thermal event superimposed on burial diagenesis of the Upper Silesia Coal Basin. *Clay Minerals* 41, 671-692.
- Środoń J., Kotarba M., Biroň A., Such P., Clauer N. and Wójtowicz A. (2006) Diagenetic history of the Podhale-Orava basin and the underlying Tatra sedimentary structural units (Western Carpathians): evidence from XRD and K-Ar of illite-smectite. *Clay Minerals* 41, 747-770.

- Środoń, J., Mystkowski, K., McCarty, D.K. and Drits, V.A. (2006) BESTMIN: a computer program for refining the quantities and the chemical composition of clays and other mineral components of fine-grained rocks. *International Conference "Clays and Clay Minerals", Pushchino, Russia, Abstracts*, p. 41.
- Środoń J. (2007) Illitization of smectite and history of sedimentary basins. Proceedings of the 11th EUROCLAY Conference, Aveiro, Portugal, 74-82.
- Środoń J. (2007) History of the Podhale flysch basin revealed by K-Ar and AFT dating and XRD study of clay minerals. Annual Report of the Polish Academy of Sciences, 97-100.
- Day-Stirrat R.J., Aplin A.C., Środoń J. and van der Pluijm B.A. (2008) Diagenetic reorientation of phyllosilicate minerals in Palaeogene mudstones of the Podhale Basin, southern Poland. *Clays & Clay Minerals* 56, 100-111.
- Środoń J. and McCarty D.K. (2008) Surface area and layer charge of smectite from CEC and EGME/H₂O retention measurements. *Clays & Clay Minerals* 56, 155-174.
- Środoń J. (2008) Diagenetic history of the Podhale flysh basin. *Geoturystyka* 13, 45-50.
- Derkowski, A., McCarty, D.K., Środoń, J., Eberl, D.D., 2008. BestRock-mineralogy, chemistry, and mineral surface property optimization to calculate petrophysical properties of the mineral matrix. *Mineralogia-Special Papers*, 33, 53.
- Szczerba M. and Środoń J. (2009) Extraction of diagenetic and detrital ages and of $^{40}\text{K}_{\text{detrital}}/^{40}\text{K}_{\text{diagenetic}}$ ratio from K-Ar dates of clay fractions. *Clays & Clay Minerals* 57, 93-103.
- Derkowski A., Środoń J., Franus W., Uhlík P., Banaś M., Zieliński G., Čaplovičová M. and Franus M. (2009) Progressive dissolution of glauconite and its implications for the methodology of K-Ar and Rb-Sr dating. *Clays & Clay Minerals* 57, 531-554.
- Środoń J., Zeelmaekers E. and Derkowski A. (2009) The charge of component layers of illite-smectite in bentonites and the nature of end-member illite. *Clays & Clay Minerals* 57, 649-671.
- Środoń J. (2009) Quantification of illite and smectite and their layer charges in sandstones and shales from shallow burial depth. *Clay Minerals* 44, 421-434.
- Środoń J., Clauer N., Huff W., Dudek T. and Banaś M. (2009) K-Ar dating of Ordovician bentonites from the Baltic Basin and the Baltic Shield: implications for the role of temperature and time in the illitization of smectite. *Clay Minerals* 44, 361-387.
- Somelar P., Kirsimäe K. and Środoń J. (2009) Mixed-layer illite-smectite in the Kinnekulle bentonite, northern Baltic Basin. *Clay Minerals* 44, 455-468.
- Szczerba M., Środoń J., Skiba M. and Derkowski A. (2010) One-dimensional structure of exfoliated polymer-layered silicate nanocomposites: A polyvinylpyrrolidone (PVP) case study. *Applied Clay Science* 47, 235-241.
- Środoń J. (2010) Evolution of mixed-layer clay minerals in prograde alteration systems. Pp. 139-173 In: "Interstratified Clay Minerals: Origin, Characterization and Geochemical Significance" (S. Fiore, J. Cuadros & F.J. Huertas Eds.), Digilabs, Bari, Italy.

Środoń J. (2010) Evolution of boron and nitrogen content during illitization of bentonites. *Clays & Clay Minerals* 58, 743-756.

Zorski T., Ossowski A., Środoń J. and Kawiak T. (2011) Evaluation of mineral composition and petrophysical parameters by the integration of core analysis data and wireline well log data: the Carpathian Foredeep case study. *Clay Minerals* 46, 25-45.

Środoń J. and Paszkowski M. (2011) Role of clays in diagenetic history of boron and nitrogen in the Carboniferous of Donbas (Ukraine). *Clay Minerals* 46, 561-582.

Środoń J. (2011) Current trends in clay science with emphasis on geological applications. *Mineralogia - Special Papers* 38, 30-32.

Środoń J. and Kawiak T. (2012) Mineral compositional trends, petrophysical and well logging parameters, and the composition of pore water in clastic rocks from shallow burial (Miocene of the Carpathian Foredeep, SE Poland) revealed by QUANTA+BESTMIN analysis. *Clays and Clay Minerals* 60, 63-75.

Zeelmaekers E., Vandenberghe N. and Środoń J. (2012) Presence of bentonite beds in the earliest Eocene Tienen Formation in Belgium as evidenced by clay mineralogical analyses. Proceedings of the Climate and Biota of the Early Paleogene Conference. *Austrian Journal of Earth Sciences* 105, 110-116.

Derkowski A., Bristow T.F., Wampler J.M., Środoń J., Marynowski L., Elliott W.C. and Chamberlain C.P. (2013) Hydrothermally-driven diagenesis of the Ediacaran Doushantuo Formation in Yangtze Gorges area (South China). *Geochimica et Cosmochimica Acta* 107, 279-298.

Środoń J., Paszkowski M., Drygant D.M., Anczkiewicz A.A. and Banaś M. (2013) Thermal history of the Silurian in the Podolia segment of the SW margin of the East European Craton inferred from combined XRD, K-Ar, and AFT data. *Clays and Clay Minerals* 61, 107-132.

Anczkiewicz A., Środoń J. and Zattin M. (2013) Thermal history of the Podhale basin in the Internal Western Carpathians from the perspective of apatite fission track analyses. *Geologica Carpathica* 64, 151-161.

Williams L., Środoń J., Huff W., Clauer N., Hervig R. (2013) Light element distributions (N, B, Li) in Baltic Basin bentonites record organic sources. *Geochimica et Cosmochimica Acta* 120, 582-599.

Zorski T., Jarzyna J., Derkowski A., Środoń J. (2013) Geofizyka otworowa w dobie poszukiwań gazu w łupkach. *Przegląd Geologiczny* 61, 424-434.

Środoń J. (2013) Identification and Quantitative Analysis of Clay Minerals. Chapter 2.2 in *Handbook of Clay Science, Developments in Clay Science* 5, F. Bergaya and G. Lagaly, eds., Elsevier, pp. 25-50.

Derkowski A., Szczerba M., Środoń J. and Banaś M. (2014) Radiogenic Ar retention in

residual silica from acid-treated micas. *Geochimica et Cosmochimica Acta* 128, 236-248.

Środoń J., Szulc J., Añczkiewicz A., Jewuła K., Banaś M., and Marynowski L. (2014) Weathering, sedimentary, and diagenetic controls of mineral and geochemical characteristics of the vertebrate-bearing Silesian Keuper. *Clay Minerals* 49, 569-594.

Łokas E., Bartmiński P., Wachniew P., Mietelski J.W., Kawiak T., Środoń J. (2014) Sources and pathways of artificial radionuclides to soils at a High Arctic site. *Environmental Science and Pollution Research* 21, 12479-12493.

Derkowski A., Środoń J. and McCarty D.K. (2015) Cation exchange capacity and water content of opal in sedimentary basins: example from the Monterey Formation, California. *American Mineralogist* 100, 1244-1256.

Zeelmaekers E., Honty M., Derkowski A., Środoń J., DeCraen M., Vandenberghe N., Adriaens R., Wouters L. (2015) Qualitative and quantitative mineralogical composition of the Rupelian Boom Clay in Belgium. *Clay Minerals* 50, 249-272.

Szczerba M., Derkowski A., Kalinichev A.G., Środoń J. (2015) Molecular modeling of the effects of ^{40}Ar recoil in illite particles on their K-Ar isotope dating. *Geochimica et Cosmochimica Acta* 159, 162-176.

Szulc J., Racki G., Jewuła K. and Środoń J. (2015) How many Upper Triassic bone-bearing levels are there in Upper Silesia (southern Poland)? A critical review of stratigraphy and facies ASGP 85, 587-626.

Añczkiewicz A.A., Danišík M., Środoń J. (2015) Multiple low temperature thermochronology constraints on exhumation of the Tatra Mts. - new implication for the complex evolution of the Western Carpathians in the Cenozoic. *Tectonics* 34, doi:10.1002/2015TC003952.

Zviagina B.B., Drits V.A., Środoń J., McCarty D.K., and Dorzhieva O. (2015) The illite-aluminoceladonite series: distinguishing features and identification criteria from XRD and FTIR data. *Clays and Clay Minerals* 63, 378-394.

Marynowski L., Pisarzowska A., Derkowski A., Rakociński M., Szaniawski R., Środoń J., Cohen A.S. (2017) Influence of palaeoweathering on trace metal concentrations and environmental proxies in black shales. *Palaeogeography, Palaeoclimatology, Palaeoecology* 472, 177-191.

Day-Stirrat R., Aplin A., Kurtev K., Schleicher A., Brown A., and Środoń J. (2017) Late diagenesis of illite-smectite in the Podhale basin, southern Poland: Chemistry, morphology and preferred orientation. *Geosphere* 13, DOI:10.1130/GES01516.1.

111 publikacji

Adriaens R., Zeelmaekers E., Fettweis M., Vanlierde E., Vanlede J., Stassen P., Elsen J.,

Środoń J. and Vandenberghe N. (2018) Quantitative clay mineralogy as provenance indicator for recent muds in the southern North Sea. *Marine Geology* 398, 48-58.

Środoń J., Anczkiewicz A.A., Dunkl I., Vlahović I., Velić I., Tomljenović B., Kawiak T.,

Banaś M. and von Eynatten H. (2018) Thermal history of Karst Dinarides, Croatia: combined application of clay mineralogy and low-T thermochronology. *Tectonophysics* 744, 155–176.

Kremer B., Kaźmierczak J. and Środoń J. (2018) Cyanobacterial-algal crusts from Late Ediacaran paleosols of the East European Craton. *Precambrian Research* 305, 236-246.

Liivamägi S., Środoń J., Bojanowski M., Gerdes A., Stanek J. J., Williams L., Szczerba M. (2018) Paleosols on the Ediacaran basalts of the East European Craton: a unique record of paleoweathering with minimum diagenetic overprint. *Precambrian Research* 316, 66-82.

Kuligiewicz, A., Derkowsk, A., Środoń, J., Gionis, V., Chryssikos, D.G., 2018. The charge of wettable illite-smectite surfaces measured with the O-D method. *Applied Clay Science* 161, 354-363.

Środoń J., Kuzmenkova O., Stanek J.J., Petit S., Beaufort D., Gilg H.A., Liivamägi S., Goryl M., Marynowski L., Szczerba M. (2019) Hydrothermal alteration of the Ediacaran Volyn-Brest volcanics on the western margin of the East European Craton. *Precambrian Research* 325, 217-235.

Paszkowski, M., Budzyń, B., Mazur, S., Sláma, J., Shumlyanskyy, L., Środoń, J., Dhuime, B., Kędzior, A., Liivamägi, S., Pisarzowska, A., 2019. Detrital zircon U-Pb and Hf constraints on provenance and timing of deposition of the Mesoproterozoic to Cambrian sedimentary cover of the East European Craton, Belarus. *Precambrian Research*, v. 331, doi.org/10.1016/j.precamres.2019.105352

Bojanowski, M.J., Goryl M., Kremer B., Marciniak-Maliszewska B., Marynowski L., Środoń J., 2020. Pedogenic siderites fossilizing Ediacaran soil microorganisms on the Baltica paleocontinent. *Geology* 48, 62–66, <https://doi.org/10.1130/G46746.1>

Clauer, N., Środoń, J., Aubert, A., Uysal, T., Toulkeridis, T. 2020. K-Ar and Rb-Sr dating of nanometer-sized smectite-rich mixed-layers from bentonite beds of the Campos Basin (Rio de Janeiro State, Brazil). *Clays and Clay Minerals*. <https://doi.org/10.1007/s42860-020-00087-5>

Derkowski A., Środoń J., Goryl M., Marynowski M., Szczerba M., Mazur S., 2021. Long-distance fluids migration defines diagenetic history of unique Ediacaran sediments in the East European Craton. *Basin Research* 33, 570–593. <https://doi.org/10.1111/bre.12485>

Dudzisz, K., Lewandowski, M., Werner, T., Karasiński, G., Kędzior, A., Paszkowski, M.,

Środoń, J., Bojanowski, M., 2021. Paleolatitude estimation and premises for geomagnetic field instability from the Proterozoic drilling core material of the south-western part of the East European Craton. *Precambrian Research* 357, <https://doi.org/10.1016/j.precamres.2021.106135>

Paszkowski M., Budzyn B., Mazur S., Sláma J., Środoń J., Millar, I. L., Shumlyanskyy, L., Kędzior, A., Liivamägi S., 2021. Detrital zircon U-Pb and Hf constraints on provenance and timing of deposition of the Mesoproterozoic to Cambrian sedimentary cover of the East European Craton, part II: Ukraine. *Precambrian Research* 362 <https://doi.org/10.1016/j.precamres.2021.106282>

Kuligiewicz A., Środoń J., Liivamägi, S., 2021. Oxygen isotopic compositions of end-members in a multicomponent mixture: a case study of the Ediacaran weathering material from the East European Craton. *Geochimica et Cosmochimica Acta* 306, 245–262. <https://doi.org/10.1016/j.gca.2021.04.013>

Liivamägi S., Środoń J., Bojanowski M.J., Stanek J.J., Roberts, N.M.W., 2021. Precambrian paleosols on the Great Unconformity of the East European Craton: an 800 million year record of Baltica's climatic conditions. *Precambrian Research* 363, 106327 <https://doi.org/10.1016/j.precamres.2021.106327>

Bojanowski, M.J., Marciniak-Maliszewska, B., Środoń, J., Liivamägi, S., 2021. Extensive non-marine depositional setting evidenced by carbonate minerals in the Ediacaran clastic series of the western East European Craton. *Precambrian Research* 365, 106379 <https://doi.org/10.1016/j.precamres.2021.106379>

Jewuła K., Środoń J., Kuligiewicz A., Mikołajczak M., Liivamägi S., 2022. Critical evaluation of geochemical indices of palaeosalinity involving boron. *Geochimica et Cosmochimica Acta* 322, 1–23. <https://doi.org/10.1016/j.gca.2022.01.027>

Środoń J., Gerdes A., Kramers, J., Bojanowski M., 2022. Age constraints of the Sturtian glaciation on western Baltica based on U-Pb and Ar-Ar dating of the Lapichi Svita. *Precambrian Research* 371, 106595

Jewuła K., Środoń J., Kędzior, A., Paszkowski, M., Liivamägi, S., Goryl, M., 2022. Sedimentary, climatic, and provenance controls of mineral and chemical composition of the Ediacaran and Cambrian mudstones from the East European Craton. *Precambrian Research* 381, 106850, <https://doi.org/10.1016/j.precamres.2022.106850>

Środoń J., Condon, D.J., Golubkova, E., Millar,I.L., Kuzmenkova, O., Paszkowski, M., Mazur, S., Kędzior, A., Drygant, D., Ciobotaru, V., Liivamägi. S., 2023. Ages of the Ediacaran Volyn-Brest trap volcanism, glaciations, paleosols, Podillya Ediacaran soft-bodied organisms, and the Redkino-Kotlin boundary (East European Craton) constrained by zircon single grain U-Pb dating. *Precambrian Research* 386, 106962. [https://doi.org/10.1016/j.precamres.2023.106962.](https://doi.org/10.1016/j.precamres.2023.106962)

Środoń J., Williams L., Szczerba M., Zaitseva T., Bojanowski M., Marciniak-Maliszewska

B., Ciesielska Z., Paszkowski M., 2023. Mechanism of late diagenetic alteration of glauconite and implications for geochronology. *Geochimica et Cosmochimica Acta* 352, 157-174.