

## LITERATURA

- ACHAB A., RUBINSTEIN C.V., ASTINI R.A., 2006 – Chitinozoans and acritarchs from the Ordovician peri-Gondwana volcanic arc of the Famatina System, northwestern Argentina. *Review of Palaeobotany and Palynology*, **139**: 129–149.
- ALBANI R., LELKES-FELVARI GY., TONGIORGY M., 1985 – First record of Ordovician (Upper Arenig, Acritarchs) beds in Bakony Mts., Hungary. *Neues Jahrbuch für Geologie und Paläontologie*, **170**, 1: 45–65.
- ALGEO T.J., TRIBOVILLARD N., 2009 – Environmental analysis of paleoceanographic systems based on molybdenum–uranium covariation. *Chemical Geology*, **268**, 3/4: 211–225.
- ALLEN J.R.L., 1982 – Sedimentary structures: their character and physical basis. *Developments in Sedimentology*, **30**. Elsevier, Amsterdam.
- ARÁOZ L., VERGEL M.M., 2006 – Palinología de la transición Cambro-Ordovicica en Quebrada de Moya, Cordillera Oriental, Argentina. *Revista Brasileira de Paleontologia*, **9**: 1–8.
- AVKHIMOVITCH V.I., TCHIBRIKOVA E.V., OBUKHOVSKAYA T.G., NAZARENKO A.M., UMNOVA V.T., RASKATOVA L.G., MANTSUROVA V.N., LOBOZIAK S., STREEL M., 1993 – Middle and Upper Devonian miospore zonation of Eastern Europe. *Bulletin des Centres de Recherches Exploration - Production Elf-Aquitaine*, **17**: 79–147.
- BAAR H.J.W. de, GERMAN C.R., ELDERFIELD H., van GAANS P., 1988 – Rare earth element distributions in anoxic waters of the Cariaco Trench. *Geochim. Cosmochim. Acta*, **52**, 5: 1203–1219.
- BAGNOLI G., RIBECAI C., 2001 – On the biostratigraphic significance of the Ordovician acritarch genus *Liliosphaeridium* on Oland, Sweden. *Review of Palaeobotany and Palynology*, **117**, 4: 195–215.
- BAKER T.L., 1995 – Elemental geochemistry and micropaleontology of an Upper Pennsylvanian black shale: The Haskell-Cass cycle (Douglas Group), southeastern Kansas [M.S. Thesis] Texas Tech University.
- BARHAM M., KIRKLAND C.L., HANDOKO A.D., 2022 – Understanding ancient tectonic settings through detrital zircon analysis. *Earth and Planetary Science Letters*, **583**: 117–425.
- BATTEN D.J., 1996 – Chapter 26A. Palynofacies and palaeoenvironmental interpretation. *W: Palynology: Principles and Applications* (red. J. Jansonius, D.C. McGregor). *American Association of Stratigraphic Palynologists Foundation*, **3**: 1011–1064.
- BAU M., DULSKI P., 1996 – Distribution of yttrium and rare-earth elements in the Penge and Kuruman iron-formations, Transvaal Supergroup, South Africa. *Precambrian Research*, **79**, 1/2: 37–55.
- BAU M., KOSCHINSKY A., DULSKI A., HEIN J.R., 1996 – Comparison of the partitioning behaviors of yttrium, rare earth elements, and titanium between hydrogenetic marine ferromanganese crusts and seawater. *Geochim. Geochimica et Cosmochimica Acta*, **60**, 10: 1709–1725.
- BAUDELOT S., BESSIÈRE G., 1977 – Données palynostratigraphiques sur le Paléozoïque inférieur du Massif de Mounhoumet (Hautes Corbières, Aude). *Annales de la Société Géologique du Nord*, **97**, 1: 21–25.
- BAUERT H., ISOZAKI Y., HOLMER L.E., AOKI K., SAKATA S., HIRATA T., 2014 – New U-Pb zircon ages of the Sandbian (Upper Ordovician) “Big K-bentonite” in Baltoscandia (Estonia and Sweden) by LA-ICPMS. *GFF*, **136**: 30–33. © Geologiska Föreningen. Doi: <http://dx.doi.org/10.1080/11035897.2013.862854>.
- BECKER R.T., GRADSTEIN F.M., HAMMER O., 2012 – The Devonian Period. *W: A Geological Time Scale 2012* (red. F. Gradstein i in.): 559–601. Elsevier, Amsterdam, Boston.
- BEDNARCZYK W.S., STEPIEŃ-SAŁEK M., WRONA R., 1999 – Integrated biostratigraphy (graptolite, acritarch and chitinozan) of the subsurface Caradocian in Pomerania, NW Poland. *Acta Universitatis Carolinae*, **43**: 53–54.
- BEHAR F., BEAUMONT V., PENTEADO H.L. De B., 2001 – Rock-Eval 6 Technology: Performances and Developments Technologie Rock-Eval 6: performances et développements. *Oil & Gas Science and Technology*, **56**, 2: 111–134.
- BERGSTRÖM S.M., HUFF W.D., SALTZMAN M.R., KOLATA D.R., LESLIE S.A., 2004 – The Greatest Volcanic Ash Falls in the Phanerozoic: Trans-Atlantic Relations of the Ordovician Millbrig and Kinnekulle K-Bentonites. *The Sedimentary Record*, **2**, 4: 4–8.
- BERTHELSEN A., 1992 – Mobile Europe. *W: A Continent Revealed: The European Geotraverse* (red. D. Blundell i in.). Cambridge University Press, Cambridge: 11–32. <https://doi.org/10.1017/CBO9780511608261.004>
- BERTHELSEN A., 1993 – Where different geological philosophies meet: the Trans-European Suture Zone. *Publications of the Institute of Geophysics, Polish Academy of Sciences*, A–20(255): 19–31.
- BHATIA M.R., 1983 – Plate tectonics and geochemical composition of sandstones. *The Journal of Geology*, **91**, 6: 611–627.
- BHATIA M.R., CROOK K.A.W., 1986 – Trace element characteristics of greywackes and tectonic setting discrimination of sedimentary basins. *Contributions to Mineralogy and Petrology*, **92**, 2: 181–193.

- BINGEN B., NORDGULEN Ø., VIOLA G., 2008 – A four-phase model for the Sveconorwegian orogeny, SW Scandinavia. *Norwegian Journal of Geology*, **88**: 43–72.
- BLACK L.P., KAMO S.L., ALLEN C.M., ALEINIKOFF J.N., DAVIS D.W., KORSCH R.J., FOUDOULIS C., 2003 – TEMORA 1: a new zircon standard for Phanerozoic U-Pb geochronology. *Chemical Geology*, **200**: 155–170.
- BLACK L.P., KAMO S.L., ALLEN, C.M., DAVIS, D.W., ALEINIKOFF J.N., VALLEY, J.W., MUNDIL R., CAMPBELL I.H., KORSCH R.J., WILLIAMS I.S., FOUDOULIS C., 2004 – Improved 206Pb/238U microprobe geochronology by the monitoring of a trace-element-related matrix effect; SHRIMP, ID-TIMS, LA-ICP-MS and oxygen isotope documentation for a series of zircon standards. *Chemical Geology*, **205**: 115–140.
- BOCKELIE T.G., KJELLSTRÖM G., 1979 – Middle Ordovician acritarchs from the Island of Odinsholm, Estonia. *Geologiska Föreningen i Stockholm Förhandlingar*, **101**: 205–216.
- BOLEWSKI A., 1982 – Mineralogia szczegółowa. Wydaw. Geol., Warszawa, str. 542.
- BOWRING S.A., SCHMITZ M.D., 2003 – High-precision U-Pb zircon geochronology and the stratigraphic record. *Reviews in Mineralogy and Geochemistry*, **53**, 1: 305–326.
- BROCHWICZ-LEWIŃSKI W., POŻARYSKI W., TOMCZYK H., 1981 – Wielkoskalowe ruchy przesuwowe wzdłuż SW brzegu platformy wschodnioeuropejskiej we wczesnym paleozoiku. *Przegląd Geologiczny*, **29**, 8: 385–396.
- BROCKE R., LI J., FATKA O., SERVAIS T., 2000 – Upper Arenigian to Lower Llanvirnian acritarch assemblages from South China: a preliminary evaluation. *Review of Palaeobotany and Palynology*, **113**: 27–40.
- BRUMSACK H.-J., 1989 – Geochemistry of recent TOC-rich sediments from the Gulf of California and the Black Sea. *Geologische Rundschau*, **78**, 3: 851–882.
- BRUMSACK H.-J., 2006 – The trace metal content of recent organic carbon-rich sediments: Implications for Cretaceous black shale formation. *Palaeogeography, Palaeoclimatology, Palaeoecology*, **232**, 2–4: 344–361.
- BUKOWY S., 1984 – Struktury warzyckie regionu śląsko-krakowskiego. *Prace Naukowe Uniwersytetu Śląskiego w Katowicach. Geologia*, **691**: 1–75.
- BUŁA Z., 2000 – Dolny paleozoik Górnego Śląska i Zachodniej Małopolski. *Prace Państwowego Instytutu Geologicznego*, **171**: 1–63.
- BUŁA Z., HABRYN R., 2008 (red.) – Atlas geologiczno-strukturalny podłoża paleozoicznego Karpat Zewnętrznych i zapadliska przedkarpackiego. PIG, Warszawa.
- BUŁA Z., HABRYN R., 2010 – Budowa geologiczna prekambru i paleozoiku regionu krakowskiego. W: Mat. Konf. „Prekambr i paleozoik regionu krakowskiego”. Kraków, 19.11.2010: 7–39. PIG-PIB, Warszawa.
- BUŁA Z., HABRYN R., JACHOWICZ-ZDANOWSKA M., ŹABA J., 2015 – The Precambrian and lower Paleozoic of the Brunovistulicum (eastern part of the Upper Silesian Block, southern Poland) – the state of the art. *Geological Quarterly*, **59**, 1: 123–134.
- BUŁA Z. (red.), HABRYN R., KRIEGER W., KUREK S., MARKOWIAK M., WOŹNIAK P., 2002 – Atlas geologiczny paleozoiku bez permu w strefie kontaktu bloków górnośląskiego i małopolskiego. PIG, Warszawa.
- BUŁA Z., JACHOWICZ M., 1996 – The Lower Paleozoic sediments in the Upper Silesian Block. *Geological Quarterly*, **40**, 3: 299–336.
- BUŁA Z., ŹABA J., 2005 – Pozycja tektoniczna Górnego Śląska na tle prekambrzkiego i dolnopaleozoicznego podłoż. W: *Geologia i zagadnienia ochrony środowiska w regionie górnośląskim* (red. J. Jureczka i in.): 14–42. Mat. LXXVI Zjazdu PTG, Rudy k/Rybnika.
- BUŁA Z., ŹABA J., 2008 – Struktura prekambrzkiego podłoża wschodniej części bloku górnośląskiego (Brunovistulicum). *Przegląd Geologiczny*, **56**, 6: 473–480.
- BUŁA Z., JACHOWICZ M., ŹABA J., 1997 – Principal characteristics of the Upper Silesian Block and Małopolska Block border zone (Southern Poland). *Geological Magazine*, **134**, 5: 669–677.
- BUŁA Z., ŹABA J., HABRYN R., 2008 – Regionalizacja tektoniczna Polski – Polska południowa (blok górnośląski i blok małopolski). *Przegląd Geologiczny*, **56**, 10: 912–920.
- CAINE J.S., EVANS J.P., FORSTER C.B., 1996 – Fault zone architecture and permeability structure. *Geology*, **24**: 1025–1028.
- CALVERT S.E., PEDERSEN T.F., 1993 – Geochemistry of Recent oxic and anoxic marine sediments: Implications for the geological record. *Marine Geology*, **113**, 1/2: 67–88.
- CAWOOD P.A., HAWKESWORTH B., DHUIME B., 2012 – Detrital zircon record and tectonic setting. *Geology*, **40**: 875–878.
- CENTRALNA BAZA DANYCH GEOLOGICZNYCH (CBDG), 2022 (<http://otworywiertnicze.pgi.gov.pl/>).
- CHADIMA M., HROUDA F., 2006 – Remasoft 3.0 – a user-friendly paleomagnetic data browser and analyzer. *Travaux Géophysiques*, **27**: 20–21.
- CHEN J.H., EDWARDS R.L., WASSERBURG G.J., 1986 – 238U, 234U and 232Th in seawater. *Earth and Planetary Science Letters*, **80**, 3/4: 241–251.
- CHESTER F.M., LOGAN J.M., 1986 – Implications for mechanical-properties of brittle faults from observations of the Punch-bowl fault zone, California. *Pure and Applied Geophysics*, **124**: 79–106. DOI:10.1007/BF0087572.
- COCCIO A., 1982 – Données nouvelles sur les ritaires du Trémadoc et de l'Arenig dans le Massif de Mouthoumet (Corbières, France). *Revue de Micropaléontologie*, **25**: 26–39.
- COLBATH G.H., 1979 – Organic-walled microphytoplankton from the Eden Shale (Upper Ordovician), Indiana, USA. *Palaeontographica Abteilung B*, **171**: 1–38.
- COLBATH G.H., 1980 – Abundance fluctuations in Upper Ordovician organic-walled microplankton from Indiana. *Micropaleontology*, **26**: 97–102.
- COMBAZ A., 1967 – Un microbion du Trémadocien dans un sondage d'Hassi-Messaoud. *Actes de la Société linnéenne de Bordeaux sér. B*, **104**, 29.
- COMBAZ A., PÉNIGUEL G., 1972 – Etude palynostratigraphique de l'Ordovicien dans quelques sondages du Bassin de Canning (Australie Occidentale). *Bulletin Centre de Recherches de Pau, S.N.P.A.*, **6**, 121–314.
- COMPSTON W., SAMBRIDGE M.S., REINFRAK R.F., MOCZYDŁOWSKA M., VIDAL G., CLAESSEN S., 1995 – Nu-

- merical ages of volcanic and the earliest faunal zone within the Late Precambrian of east Poland. *Journal of the Geological Society of London*, **152**: 599–611.
- COONERY C., HIGGS K.T., 1999 – Tremadoc-Arenig acritarchs from the Annascaul Formation, Dingle Peninsula, Co., Kerry, Ireland. *W: Studies in Palaeozoic palynology* (red. M. Tongiorgi, G. Playford). Selected paper from the CIMP Symposium at Pisa, 1998. *Bollettino della Società Paleontologica Italiana*, **38**, 2/3: 133–153.
- COOPER A.H., MOLYNEUX S.G., 1990 – The age andcorrelation of Skiddaw Group (early) Ordovician sediments in the Cross Fell inlier (northern England). *Geological Magazine*, **127**, 2: 137–157.
- COUTTS D.S., MATTHEWS W.A., HUBBARD S.M., 2019 – Assessment of widely used methods to derive depositional ages from detrital zircon populations. *Geoscience Frontiers*, **10**, 4: 1421–1435. Doi: 10.1016/j.gsf.2018.11.002.
- DICKINSON W.R., GEHRELS G.E., 2009 – Use of U-Pb ages of detrital zircons to infer maximum depositional ages of strata: a test against a Colorado Plateau Mesozoic database. *Earth Planetary Sciences Letters*, **288**: 115–125. Doi: 10.1016/j.epsl.2009.09.013.
- CRAMER F.H., DIEZ M. del C.R., 1977 – Late Arenigian (Ordovician) acritarchs from Cis-Saharan, Morocco. *Micropaleontology*, **23**, 3: 339–360.
- DADLEZ R., 1993 – Pre-Cainozoic tectonics of the southern Baltic Sea. *Geological Quarterly*, **37**, 3: 431–446.
- DADLEZ R., 2006 – The Polish Basin – relationships between crystalline and sedimentary crust. *Geological Quarterly*, **50**, 1: 43–57.
- DADLEZ R., JAROSZEWSKI W., 1994 – Tektonika. PWN, Warszawa.
- DALRYMPLE R. W., KNIGHT R.J., ZAITLIN B.A., MIDDLETON G.V., 1990 – Dynamics and facies model of a macrotidal sand-bar complex, Cobequid Bay-Salmon River Estuary (Buy of Fundy). *Sedimentology*, **37**, 4: 577–612.
- DALRYMPLE R.W., ZAITLIN B.A., 1994 – High-resolution sequence stratigraphy of a complex, incised valley succession, Cobequid Bay-Salmon River estuary, Bay of Fundy, Canada. *Sedimentology*, **41**, 6: 1069–1091.
- DEFLANDRE G., 1946 – Fichier micropaléontologique – série 8. Hystrichosphaeridés III. Espèces du Primaire. *Archives originales Centre de documentation, CNRS*, **257**: 1096–1185.
- DEUNFF J., 1955 – Un microplancton fossile dévonien à Hystrichosphères du Continent Nord-américain. *Bull. Microsc.*, **5**: 11–12, 138–149.
- DEUNFF J., 1959 – Microorganismes planctiniques du Primaire arémoracain. I. ordovicien du Veryhac'h (Presqu'île de Crozon). *Bulletin de la Société géologique et minéralogique de Bretagne*, **2**: 1–41.
- DEUNFF J., 1961 – Un microplancton à Hystrichosphères dans la Tremadoc du Sahara. *Revue de Micropaléontologie*, **4**: 37–52.
- DEUNFF J., 1968 – Arbusculidium, genre nouveau d'Acritharche du Trémadocien marocain. *C. r. Soc. Géol.*, **3**: 101–102.
- DICKINSON W.R., GEHRELS G.E., 2009 – Use of U-Pb ages of detrital zircons to infer maximum depositional ages of strata: a test against a Colorado Plateau Mesozoic data base. *Earth and Planetary Science Letters*, **288**: 115–125.
- DODSON M.H., COMPSTON W., WILLIAMS I.S., WILSON J.F., 1988 – A search for ancient detrital zircons in Zimbabwean sediments. *Journal of the Geological Society of London*, **145**: 977–983.
- DOKUMENTACJA GEOLOGICZNA OTWORU BADAWCZEGO BIBIELA PIG-1 dla potrzeb przedsięwzięcia z dziedziny geologii pod tytułem: „Program wiercen badawczych państwownej służby geologicznej PIG-PIB – Wiertnicze zbadanie nierośponnanych profili prekambru i dolnego paleozoiku w północno-wschodniej części bloku górnośląskiego i ich potencjału złożowego. Etap I – otwór badawczy Bibielo PIG-1”. Narod. Arch. Geol. PIG-PIB, Warszawa [nr.inwent. NAG 5689/20].
- DORNING K.J., 1999 – Ordovician acritarch biohorizons, palaeoenvironmental interpretation and event stratigraphy. *Acta Universitatis Carolinae Geologica*, **43**: 237–240.
- DOWNIE C., 1958 – An assemblage of microplancton from the Shineton Shales (Tremadocian). *Proceedings of the Yorkshire Geological Society*, **31**, 331–349.
- DOWNIE C., SARJEANT W.A.S., 1963 – On the interpretation and status of same Hystrichosphere genera. *Paleontology*, **6**, 1: 83–96.
- DÖRR W., STEIN E., KIRCHNER F., MEINAß H.P., VELLEDITS F., 2022 – Provenance of lower Palaeozoic metasediments of the East Odenwald (Mid German Crystalline Zone, Variscides) – a correlation with the East European Platform (Poland). *International Journal of Earth Sciences*, **111**: 3–25.
- DUNHAM R.J., 1962 – Classification of carbonate rocks according to depositional texture. *W: Classification of carbonate rocks* (red. W.E. Ham). *American Association of Petroleum Geologists Memoir*, **1**: 108–121.
- EINSELE G., 2000 – Sedimentary basins. Evolution, Facies, and Sediment Budget. Springer Verlag, Berlin, Heidelberg, New York.
- EISENACK A., 1931 – Neue Mikrofossilien des baltischen Silurs I. *Paläontologische Zeitschrift*, **13**, 1/2: 74–118.
- EISENACK A., 1938 – Neue Mikrofossilien des baltischen Silurs IV. *Paläontologische Zeitschrift*, **19**, 3/4: 217–243.
- EISENACK A., 1951 – Über Hystrichosphaerien und andere Kleinformen aus baltischen Silur und Kambrium. *Senckenbergiana*, **32**, 1/4: 187–204.
- EISENACK A., 1958 – Microfossilien aus dem Ordovizium des Baltikums. I. Markasitschicht, Dictyonema-Schiefer, Glaukonitsand, Glaukonitkalk. *Sencl. Leth.*, **39**, 5/6: 389–405.
- EISENACK A., 1965 – Die Mikrofauna der Ostseekalke. 1. Chitinozoen, Hystrichosphären. *Neues Jahrbuch für Geologie und Paläontologie, Abhandlungen*, **123**: 115–148.
- EISENACK A., 1969 – Zur Systematik einiger paläozoischer Hystrichosphären (Acritharcha) des baltischen Gebietes. *Neues Jahrbuch für Geologie und Paläontologie*, **133**, 3: 245–266.
- EISENACK A., 1976 – Microfossilien aus dem Vaginatenkalk von Hälludden, Öland. *Palaeontographica, Abt. A*, **154**, 181–203.
- EISENACK A., CRAMER F.H., DÍEZ R.M., 1973 – Katalog der fossilen Dinoflagellaten, Hystrichospären und verwandten

- Mikrofossilien. Band III Acritarcha 1 Teil. E. Schweizerbart'sche Verlagsbuchhandlung, Stuttgart, 1104 pp.
- EISENACK A., CRAMER F.H., DÍEZ R.M., 1976 – Katalog der fossilen Dinoflagellaten, Hystrichospären und verwandten Mikrofossilien. Band IV Acritarcha 2 Teil. E.Schweizerbart'sche Verlagsbuchhandlung, Stuttgart, 863 pp.
- ELAOUAD-DEBBAJ Z., 1984 – Acritarches et chitinozoaires del; Arenig-Llanvirn de l'Abti-Atlas (Maroc). *Review of Palaeobotany and Palynology*, **43**: 67–88.
- ELLWOOD B.B., CRICK R.E., EL HASSANI A., BENOIST S., YOUNG R., 2000 – Magnetosusceptibility event and cyclostratigraphy (MSEC) in marine rocks and the question of detrital input versus carbonate productivity. *Geology*, **28**: 1135–1138.
- ENKIN R.J., WATSON G.S., 1996 – Statistical analysis of paleomagnetic inclination data. *Geophysical Journal International*, **126**: 495–504.
- FAULKNER D.R., JACKSON C.A.L., LUNN R.J., SCHLISCHE R.W., SHIPTON Z.K., WIBBERLEY C.A.J., WITHJACK M.O., 2010 – A review of recent developments concerning the structure mechanics and fluid flow properties of fault zones. *Journal of Structural Geology*, **32**: 1557–1575. Doi: 10.1016/j.jsg.2010.06.009.
- FEDO C.M., NESBITT H.W., YOUNG G.M., 1995 – Unraveling the effects of potassium metasomatism in sedimentary rocks and paleosols, with implications for paleoweathering conditions and provenance. *Geology*, **23**, 10: 921–924.
- FEDO C.M., SIRCOMBE K.N., RAINBIRD R.H., 2003 – Detrital zircon analysis of the sedimentary record. *Reviews in Mineralogy and Geochemistry*, **53**, 1: 277–303.
- FIJAŁKOWSKA-MADER A., MALEC J., 2011 – Biostratigraphy of the Emsian and Eifelian in the Holy Cross Mountains, Poland. *Geological Quarterly*, **55**, 2: 109–138.
- FILIPIAK P., 2009 – Lower Famennian phytoplankton from the Holy Cross Mountains, Central Poland. *Review of Palaeobotany and Palynology*, **157**: 326–338.
- FILIPIAK P., 2011 – Palynology of the Lower and Middle Devonian deposits in southern and central Poland. *Review of Palaeobotany and Palynology*, **166**: 213–252.
- FILIPIAK P., 2014 – Palinologia dolnodewońskich i środkowodwońskich osadów klastycznych z otworu wiertniczego Trojanowice 2. *Bulletyn Państwowego Instytutu Geologicznego* **459**: 7–32.
- FILIPIAK P., KENRICK P., WAWRZYNIAK Z., KONDAS M., STRULLU-DERRIEN C., 2022 – Plants and palynomorphs from the Lower Devonian (upper Emsian) of the Holy Cross Mountains, Poland. *Review of Palaeobotany and Palynology*, **302**: 1–22.
- FITCHES W.R., CAVE R., CRAIG J., MALTMAN A.J., 1986 – Early veins as evidence of detachment in the Lower Palaeozoic rocks of the Welsh Basin. *Journal of Structural Geology*, **8**: 607–620.
- FOLK R.L., 1968 – Petrology of sedimentary rocks. The University of Texas, Austin.
- FOSTER C.B., WICANDER R., 2016 – An Early Ordovician organic-walled microphytoplankton assemblage from the Nambeet Formation, Canning Basin, Australia: biostratigraphic and paleogeographic significance. *Palynology*, **40**: 379–409.
- FOSTER C.B., WICANDER R., PLAYFORD G., 2002 – *Eomeris-mopedia maureeniae* n.g. n.sp., a chroococcacean cyanobacterium from the lower Ordovician Coolibah Formation, Georgia Basin, Queensland, Australia. *Neues Jahrbuch für Geologie und Paläontologie, Monatshefte*, **2**: 65–74.
- FOURNIER-VANAS C., 1985 – Acritarches Ordoviens des Zekkara (Maroc Oriental). *Géobios*, **18**: 807–813.
- FRANKE W., 1989 – Tectonostratigraphic units in the Variscan belt of central Europe. *Geological Society of America Special Papers*, **230**: 67–90.
- GAUCHER C., SPRECHMANN P., 2009 – Neoproterozoic acritarch evolution. *W: Neoproterozoic-Cambrian Tectonics, Global Change and Evolution: a focus on south western Gondwana. Developments* (red. C. Gaucher i in.). *Precambrian Geology*, **16**: 319–326.
- GEE D.G., BECKHOLMEN M. (red.) 1993 – EUROPORBE Symposium Jablonna 1991. *Publications of the Institute of Geophysics, Polish Academy of Sciences*, **255**: 19–31.
- GEHRELS G., 2012 – Detrital Zircon U-Pb Geochronology: current Methods and New Opportunities. *W: Tectonics of Sedimentary Basins: Recent Advances* (red. C. Busby, A. Azor): 45–62. Blackwell Publishing Ltd.
- GEHRELS G., 2014 – Detrital Zircon U-Pb Geochronology Applied to Tectonics. *Annual Review of Earth and Planetary Sciences*, **42**, 1: 127–149.
- GERMAN C.R., ELDERFIELD H., 1990 – Application of the Ce anomaly as a paleoredox indicator: The ground rules. *Paleoceanography and Paleoclimatology*, **5**, 5: 823–833.
- GHAVIDEL-syooki M., VECOLI M., 2008 – Palynostratigraphy of Middle Cambrian to lowermost Ordovician stratal sequences in the High Zagros Mountains, Southern Iran: regional stratigraphic implications, and palaeobiogeographic significance. *Review of Palaeobotany and Palynology*, **150**: 97–114.
- GŁADYSZ J., JACHOWICZ M., PIEKARSKI K., 1990 – Akritarchy paleozoiczne z okolic Siewierza (północne obrzeżenia GZw). *Kwartalnik Geologiczny*, **34**: 623–646.
- GŁADYSZ J., POŁANIECKA B., ZUBER K., 1982 – Sprawozdanie z prac geologiczno-poszukiwawczych za złożami rud cynku i ołowiu w NE części regionu śląsko-krakowskiego – obszar Bibiela. Narod. Arch. Geol. PIG-PIB, Kraków.
- GŁOWACKI E., KARNKOWSKI P., 1963 – Comparison of Upper Precambrian (Riphaean) of Middle Carpathians Foreland with a series of schists of Dobrudja (in Polish with English summary). *Kwartalnik Geologiczny*, **7**: 187–195.
- GŁOWACKI E., KARNKOWSKI P., ŹAK C., 1963 – Pre-Cambrian and Cambrian in the Basement of the Carpathian Foreland and the Holy Cross Mts. (in Polish with English summary). *Rocznik PTG*, **33**, 3: 321–338.
- GÓRKA H., 1967 – Quelques nouveaux Acritarches des silexites du Trémadocien supérieur de la région de Kielce (Montagne de Ste Croix, Pologne). *Cahiers de Micropaléontologie*, **1**, 6: 1–8.
- GÓRKA H., 1969 – Microorganismes de l'Ordovicien de Pologne. *Palaeontologia Polonica*, **22**.
- GÓRKA H., 1979 – Les Arcitarches de l'Ordovicien moyen d'Olsztyn IG 2 (Pologne). *Acta Palaeontologica Polonica*, **24**: 351–376.

- GÓRKA H., 1980 – Le microplancton de l'Ordovicien moyen de Strabla (Pologne). *Acta Palaeontologica Polonica*, **25**: 261–277.
- GÓRKA H., 1987 – Acritarches et Prasinophyceae de l'Ordovician moyen (Viruen) du sondage de Smedsby Gård no. 1 (Gotland Suède). *Review of Palaeobotany and Palynology*, **52**: 257–297.
- GÓRKA H., 1990 – Ordowik. Flora: Grupa Acritarcha Evitt, 1963. W: Budowa Geologiczna Polski (red. M. Pajchlowa): 255–269. T. III. Atlas skamieniałości przewodniczych i charakterystycznych, cz. 1a, Paleozoik starszy (z proterozoikiem górnym). Wydaw. Geol., Warszawa.
- GRABOWSKI J., 2000 – Palaeo- and rock magnetism of Mesozoic carbonate rocks in the Sub-Tatric series (Central West Carpathians) – Palaeotectonic implications. *Polish Geological Institute Special Papers*, **5**: 1–87.
- GRABOWSKI J., BABEK O., NAWROCKI J., TOMEK Č., 2008 – New palaeomagnetic data from the Palaeozoic carbonates of the Moravo – Silesian Zone (Czech Republic): evidence for timing and origin of the late Variscan remagnetization. *Geological Quarterly*, **52**: 321–334.
- GRADZIŃSKI R., DOKTOR M., 1996 – Heterolityczne osady pływowwe w seriach paralicznych, górny karbon, górnośląskie zagłębie węglowe, południowa Polska. *Przegląd Geologiczny*, **44**, 11: 1089–1094.
- GRADZIŃSKI R., KOSTECKA A., RADOMSKI A., UNRUG R., 1986 – Zarys sedymentologii. Wydaw. Geol., Warszawa.
- GREY K., 2005 – Ediacaran palynology of Australia. *Memoirs of the Association of Australasian Palaeontologists*, **31**: 1–439.
- HABRYN R., BUŁA Z., CHMURA A., ADAMCZAK-BIAŁY T., GRABOWSKI J., JACHOWICZ-ZDANOWSKA M., KOSAKOWSKI P., KUBERSKA M., LASOŃ K., MARKOWIAK M., NAWROCKI J., PAŃCZYK M., PIOTROWSKI A., SIKORA R., SIKORSKA-JAWOROWSKA M., SIKORSKA D., WOŹNIAK P., ZDANOWSKI A., ŻABA J., 2013 – Projekt dokumentacji robót geologicznych na wykonanie otworu badawczego Bibiela PIG 1 dla potrzeb przedsięwzięcia z dziedziny geologii pod tytułem: „Program wiercen badawczych państwowej służby geologicznej PIG-PIB – Wiertnicze zbadanie niero-позnanych profili prekambru i dolnego paleozoiku w północno-wschodniej części bloku górnośląskiego i ich potencjału złożowego. Etap I. Narod. Arch. Geol. PIG-PIB, Warszawa.
- HABRYN R. (red.), ADAMCZAK-BIAŁY T., CHMURA A., GRABOWSKI J., JACHOWICZ-ZDANOWSKA M., KRZEMIŃSKA E., KRZEMIŃSKI L., KUBERSKA M., LASOŃ K., MARKOWIAK M., NAWROCKI J., PAŃCZYK M., PACZEŃSKA J., PIOTROWSKI A., SALWA S., SIKORA R., SIKORSKA-JAWOROWSKA M., Żaba J., 2017 – Dokumentacja geologiczna otworu badawczego biebera PIG-1 dla potrzeb przedsięwzięcia z dziedziny geologii pod tytułem: „Program wiercen badawczych państwowej służby geologicznej PIG-PIB – Wiertnicze zbadanie niero-позnanych profili prekambru i dolnego paleozoiku w północno-wschodniej części bloku górnośląskiego i ich potencjału złożowego. Etap I – otwór badawczy Bibiela PIG-1”. Narod. Arch. Geol. PIG-PIB, Warszawa [nr.inwent. NAG 5689/20].
- HABRYN R., BAGIŃSKA A., 2020 – Otwór Bibiela PIG 1 – nowe spojrzenie na budowę geologiczną północnej części bloku górnośląskiego (<https://www.pgi.gov.pl/aktualnosci/display/12624-otwor-bibiela-pig-1-nowe-spojrzenie-na-budowe-geologiczna-polnocnej-czesci-bloku-gornoslaskiego.html> [dostęp: 28.09.2023]).
- HABRYN R., KRZEMIŃSKA E., KRZEMIŃSKI L., MARKOWIAK M., ZIELIŃSKI G., 2020 – Detrital zircon age data from the conglomerates in the Upper Silesian and Małopolska blocks, and their implications for the pre-Variscan tectonic evolution (S Poland). *Geological Quarterly*, **64**, 2: 321–341. DOI: 10.7306/gq.1539.
- HATCH J.R., LEVENTHAL J.S., 1992 – Relationship between inferred redox potential of the depositional environment and geochemistry of the Upper Pennsylvanian (Missourian) Stark Shale Member of the Dennis Limestone, Wabaunsee County, Kansas, U.S.A. *Chemical Geology*, **99**, 1–3: 65–82.
- HENRY J.L., 1969 – Microorganismes incertae sedis (Acritarches et Chitinozoaires) de l'Ordovicien de la presqu'île de Crozon (finistère): gisements de Mort-Anglaise et de Kerlantin. *Bulletin de la Société géologique et minéralogique de Bretagne*, **1968**: 59–100.
- HERRON M.M., 1988 – Geochemical classification of terrigenous sands and shales from core or log data. *Journal of Sedimentary Research*, **58**, 5: 820–829.
- HURFORD A., FITCH F., CLARKE A., 1984 – Resolution of the age structure of the detrital zircon populations of two Lower Cretaceous sandstones from the Weald of England by fission track dating. *Geological Magazine*, **121**: 269–396.
- HUTLEY W.J., XIAO S., KOWALEWSKI M., 2006 – 1.3 Billion years of acritarch history: An empirical morphospace approach. *Precambrian Research*, **144**: 52–68.
- JACHOWICZ M., 2005 – Ordowickie akritarchy bloku górnośląskiego. *Przegląd Geologiczny*, **53**, 9: 756–762.
- JACHOWICZ-ZDANOWSKA M., 2010 – Palinologia kambru dolnego bloku górnośląskiego i prekambru bloku małopolskiego w regionie krakowskim. W: Mat. Konf. „Prekambr i paleozoik regionu krakowskiego”. Kraków, 19.11.2010: 67–92. PIG-PIB, Warszawa.
- JACHOWICZ-ZDANOWSKA M., 2011 – Organic microfossil assemblages from the late Ediacaran rocks of the Małopolska Block, southeastern Poland. *Geological Quarterly*, **55**, 2: 85–94.
- JACHOWICZ-ZDANOWSKA M., 2013 – Cambrian Phytoplankton of the Brunovistulicum – taxonomy and biostratigraphy. *Polish Geological Special Papers*, **28**.
- JACHOWICZ-ZDANOWSKA M., 2014 – Mikroskamieniałości organiczne terenów (kambr dolny) i późnego ediacaru (neo-proterozoik) okolic Krakowa. *Bulletyn Państwowego Instytutu Geologicznego*, **459**: 61–82.
- JACOBSON S.R., 1978 – Acritarchs from the Upper Ordovician Clays Ferry Formation, Kentucky, U.S.A. *Palinología, Número extraordinario*, **1**: 293–301.
- JAGIELSKA L., 1962 – Preliminary note on microspores from the Ordovician of Brzeziny and Zbrza in the Święty Krzyż Mts. (in Polish, English summary). *Bulletyn Instytutu Geologicznego*, **174**: 21–64.

- JAGIELSKA L., 1966 – Microflora in the eocambrian and Lower Cambrian deposits in the eastern area of Poland. *Kwartalnik Geologiczny*, **10**: 251–261.
- JAMBOR J.L., KOVALENKER V.A., ROBERTS A.C., 2003 – New mineral names. *American Mineralogist*, **88**: 931–935.
- JANAS M., 2017 – Badania geochemiczne materii organicznej. W: Dokumentacja geologiczna otworu badawczego biebla PIG-1 dla potrzeb przedsięwzięcia z dziedziny geologii pod tytułem: „Program wiercen badawczych państwowej służby geologicznej PIG-PIB – Wiertnicze zbadanie nieroznanych profili prekambru i dolnego paleozoiku w północno-wschodniej części bloku górnośląskiego i ich potencjału złożowego. Etap I – otwór badawczy Bibiela PIG-1” (red. R. Habryn). Narod. Arch. Geol. PIG-PIB, Warszawa [nr. inwent. NAG 5689/20].
- JANKAUSKAS T.V., 1989 – Microfossili dokembrija SSSR. Nauka, Moskwa.
- JANKAUSKAS T.V., 2002 – Cambrian stratigraphy of Lithuania. Institute of Geology of Lithuania, Vilnus.
- JANKAUSKAS T., LENDZION K., 1992 – Lower and Middle Cambrian acritarch-based biozonation of the Baltic syneclide and adjacent areas (East-European Platform). *Przegląd Geologiczny*, **40**, 9: 519–525.
- JAROSZEWSKI W., 1972 – Drobnostrukturalne kryteria tektoniki obszarów nieorogenicznych na przykładzie północno-wschodniego obrzeżenia mezozoicznego Górnego Świętokrzyskiego. *Studia Geologica Polonica*, **38**: 1–216.
- JAROSZEWSKI W. (red), 1986 – Przewodnik do ćwiczeń z geologii dynamicznej. Wydaw. Geol., Warszawa.
- JAWOROWSKI K., 1987 – Kanon petrograficzny najczęstszych skał osadowych. *Przegląd Geologiczny*, **35**, 4: 205–209.
- JAWOROWSKI K., JURKIEWICZ H., KOWALCZEWSKI Z. 1967 – Sinian and Palaeozoic in the bore-hole Jaronowice IG 1 (in Polish with English summary). *Kwartalnik Geologiczny*, **11**: 21–38.
- JESSELL M.W., WILLMAN C.E., GRAY D.R., 1994 – Bedding parallel veins and their relationship to folding. *Journal of Structural Geology*, **16**: 753–767.
- JONES B., MANNING D.A.C., 1994 – Comparison of geochemical indices used for the interpretation of palaeoredox conditions in ancient mudstones. *Chemical Geology*, **111**, 1–4: 111–129.
- JURKIEWICZ H., 1975 – The geological structure of the basement of the Mesozoic in the central part of the Miechów Trough (in Polish with English summary). *Bulletyn Instytutu Geologicznego*, **283**: 5–100.
- KARNKOWSKI P., 1977 – Deep-seated basement of the Carpathians (in Polish with English summary). *Przegląd Geologiczny*, **25**, 6: 289–297.
- KICUŁA J., WIESER T., 1970 – Precambrian sediments and lamprophyres in the bore-hole Opatkowice 1 (in Polish with English summary). *Rocznik PTG*, **40**: 111–129.
- KIERSNOWSKI H., 1991 – Litostratigrafia permu północno-wschodniego obrzeżenia GZW – nowa propozycja. *Przegląd Geologiczny*, **39**, 4: 198–203.
- KJELLSTRÖM G., 1971 – Ordovician microplankton (baltisphaerids) from the Grötlingbo Borehole no. 1 in Gotland, Sweden. *Sveriges Geologiska Undersökning, ser. C*, **655**, 65: 1–75.
- KJELLSTRÖM G., 1976 – Lower Viruan (Middle ordovician) microplankton from the Ekön Borehole No.1 in Östergötland, Sweden. *Sveriges Geologiska Undersökning, Ser. C*, **724**, 70, 6: 1–44.
- KNOLL A.H., 2000 – Learning to tell Neoproterozoic time. *Precambrian Research*, **100**: 3–20.
- KOLOSOVA S.P., 1991 – Late Precambrian acanthomorphic microfossils of the eastern Siberian Platform. *Algologiya*, **1**: 53–59.
- KOTARBA M., SZAFRA S., 1985 – Zastosowanie analizatorów Rock-Eval i Oil Show w poszukiwaniach naftowych. *Nasta*, **41**, 3: 81–88.
- KOTLAREK P., 2017 – Badania petrograficzne. W: Dokumentacja geologiczna otworu badawczego Bibiela PIG-1 dla potrzeb przedsięwzięcia z dziedziny geologii pod tytułem: „Program wiercen badawczych państwowej służby geologicznej PIG-PIB – Wiertnicze zbadanie nieroznanych profili prekambru i dolnego paleozoiku w północno-wschodniej części bloku górnośląskiego i ich potencjału złożowego. Etap I – otwór badawczy Bibiela PIG-1”: 109–113. Narod. Arch. Geol., PIG-PIB, Warszawa [nr kat. NAG 5689/2020].
- KREMER B., 2001. Acritarchs from the Upper Ordovician of southern Holy Cross Mountains, Poland. *Acta Palaeontologica Polonica*, **46**: 595–601.
- KRZEMIŃSKA E., CZUPYT Z., RECHOWICZ M., 2017 – Badania wieku materiału detrytycznego – podsumowanie badań geochronologicznych w profilu Bibiela PIG-1. W: Dokumentacja geologiczna otworu badawczego Bibiela PIG-1 dla potrzeb przedsięwzięcia z dziedziny geologii pod tytułem: „Program wiercen badawczych państwowej służby geologicznej PIG-PIB – Wiertnicze zbadanie nieroznanych profili prekambru i dolnego paleozoiku w północno-wschodniej części bloku górnośląskiego i ich potencjału złożowego. Etap I – otwór badawczy Bibiela PIG-1”: 109–113. Narod. Arch. Geol., PIG-PIB, Warszawa [nr kat. NAG 5689/2020].
- KRZEMIŃSKI L., POPRAWA P., 2006 – Geochemia klastycznych osadów ordowiku i syluru ze strefy Koszalin-Chojnice i zachodniej części basenu bałtyckiego. W: Ewolucja facjalna, tektoniczna i termiczna pomorskiego segmentu szwu transeuropejskiego oraz obszarów przyległych (red. H. Matyja, P. Poprawa). *Prace Państwowego Instytutu Geologicznego*, **186**: 123–148.
- KUBERSKA M., KOZŁOWSKA A., SIKORSKA-JAWOROWSKA M., GROTEK I., 2021 – Charakterystyka mikrolitofacji oraz warunków paleotemperaturowych skał ediacaru w otworze wiertniczym Bibiela PIG 1. *Przegląd Geologiczny*, **69**, 6: 374–378.
- LARSONNEUR C., 1994 – The Bay f Mont Saint Michel: a sedimentation model in a temperate macrotidal environment. *Senckenbergiana Maritima*, **24**, 1/6: 3–63.
- LASOŃ K., 2007 – Geochemia skał wendyjskich i dolnopaleozoicznych w obszarze krakowsko-lublinieckim. Narod. Arch. Geol. PIG-PIB, Warszawa.
- LASOŃ K., 2017 – Badania geochemiczne skał z otworu Bibiela PIG-1. W: Dokumentacja geologiczna otworu badawczego Bibiela PIG-1 dla potrzeb przedsięwzięcia z dziedziny geologii pod tytułem: „Program wiercen badawczych państ-

- wowej służby geologicznej PIG-PIB – Wiertnicze zbadanie nierośpoznanych profili prekambru i dolnego paleozoiku w północno-wschodniej części bloku górnośląskiego i ich potencjału złożowego. Etap I – otwór badawczy Bibiela PIG-1”: 109–113. Narod. Arch. Geol., PIG-PIB, Warszawa [nr kat. NAG 5689/2020].
- LI J., 1987 – Ordovician acritarchs from the Meitan Formation of Guizhou Province, south-west China. *Palaeontology*, **30**, 3: 613–634.
- LI J., SERVAIS T., BROCKE R., 2002 – Chinese Paleozoic acritarch research: review and perspectives. *Review of Palaeobotany and Palynology*, **118**: 181–193.
- LI J., SERVAIS T., YAN K., 2010 – Acritarch biostratigraphy of the lower-middle Ordovician boundary: the global stratotype section and point (GSSP) of Huanghuachang, Sout China. *Newsletters on Stratigraphy*, **43**: 235–250.
- LI J., SERVAIS T., YAN K., 2014 – The Ordovician acritarch genus Rhopaliphora: Biostratigraphy, palaeobiogeography and palaeoecology. *Review of Palaeobotany and Palynology*, **208**: 1–24.
- LI J., WANG Y., BROCKE R., 2000 – Ordovician acritarchs from the Shihtzupu Formation Formation of Tongzi, Guizhou, South China. *Acta Micropalaeont. Sinica*, **17**, 1: 30–38.
- LINCKOWSKA-MAKOWSKA M., 1978 – Opracowanie mikroflozy otworu wiertniczego BM-152. Arch. Inst. Geol. Sur. Miner. AGH, Kraków.
- LI Y.-H., 2000 – A Compendium of Geochemistry. From Solar Nebula to the Human Brain. Princeton Univ. Press, Princeton.
- LI Y.-H., SCHOONMAKER J.E., 2003 – Chemical composition and mineralogy of marine sediments. *W: Treatise on Geochemistry* (red. H.D. Holland, K.K. Turekian), vol. 7: Sediments, Diagenesis, and Sedimentary Rocks (red. F.T. Mackenzie): 1–35. Elsevier Pergamon, Oxford. Doi: 10.1016/B0-08-043751-6/07088-2.
- LINNEMANN U., GEHMLICH M., TICHOMIROWA M., BUSCHMANN B., NASDALA L., JONAS P., LUETZNER H., BOMBACH K., 2000 – From Cadomian subduction to early Paleozoic rifting; the evolution of Saxo-Thuringia at the margin of Gondwana in the light of single zircon geochronology and basin development (Central European Variscides, Germany). *Geological Society Special Publications*, **179**: 131–153.
- LIU Y.-G., MIAH M.R.U., SCHMITT R.A., 1988 – Cerium: A chemical tracer for paleo-oceanic redox conditions. *Geochimica et Cosmochimica Acta*, **52**, 6: 1361–1371.
- LOEBLICH A.R., 1970 – Morphology, ultrastructure and distribution of Paleozoic acritarchs. *W: Proceedings of the North American Paleontological Convention*, Chicago, 1969, part G, 2: 705–788.
- LOEBLICH A.R., McADAM R.B., 1971 – North American species of the Ordovician acritarch genus Aremoricanum. *Paleontographica Abt. B*, **135**: 1/2: 41–47.
- LOEBLICH A.R., TAPPAN H., 1969 – Acritarch excystment and surface ultrastructure with descriptions of some ordovician Taxa. *Revista Española Micropaleont.*, **1**: 45–57.
- LOEBLICH A.R., TAPPAN H., 1978 – Some Middle and Late Ordovician microphytoplankton from central North America. *Journal of Palaeontology*, **55**, 6: 1233–1287.
- LU L., 1987 – Acritarchs from the Dawan Formation (Arenigian) of Huanghuachang in Yichang, western Hubei. *Acta Micropalaeont. Sinica*, **4**, 1: 87–102.
- LUDWIG K.R., 2000 – SQUID 1.00, A User’s Manual; Berkeley Geochronology Center Special Publication. No. 2, 2455 Ridge Road, Berkeley, CA 94709, USA.
- LUDWIG K.R., 2003 – Isoplot/Ex version 3.0. A geochronological toolkit for Microsoft Excel. Berkeley Geochronology Center Special Publication No. 1a, 2455 Ridge Road, Berkeley CA 94709, USA.
- LUDWIG K.R., 2008 – Isoplot/Ex 3.70. A Geochronological Toolkit for Microsoft Excel. Berkeley Geochronological Center, Berkely, CA, USA, Special Publication No. 4., pp. 76.
- ŁYDKA K., 1985 – Petrologia skał osadowych. Wydaw. Geol., Warszawa.
- MAHER B.A., THOMPSON R., 1999 – Quaternary Climates, Environments and Magnetism. Cambridge University Press.
- MAŁKOWSKI S., KARASIŃSKI W., 1928 – Skład chemiczny i charakterystyka petrograficzna lamprofirów Góra Świętokrzyskich i okolic Polskiego Zagłębia Węglowego. *Posiedzenia Naukowe Państwowego Instytutu Geologicznego*, **19/22**: 39–41.
- MARKIEWICZ J., MARKOWIAK M., 1998 – Inwentaryzacja (kolekcja skał i baza danych) paleozoicznych skał krystalicznych i piroklastycznych regionu krakowsko-częstochowskiego. Narod. Arch. Geol. PIG-PIB, Oddział Górnospolski w Sosnowcu.
- MARKOWIAK M., 2015 – Charakterystyka mineralizacji kruszcowej na tle przeobrażeń termiczno-metasomatycznych skał w rejonie Żarek-Kotowic. *Prace Państwowego Instytutu Geologicznego*, **203**: 1–74.
- MARKOWIAK M., 2017 – Charakterystyka mineralizacji kruszcowej. *W: Dokumentacja geologiczna otworu badawczego Bibiela PIG-1 dla potrzeb przedsięwzięcia z dziedziny geologii pod tytułem: „Program wierceń badawczych państowej służby geologicznej PIG-PIB – Wiertnicze zbadanie nierośpoznanych profili prekambru i dolnego paleozoiku w północno-wschodniej części bloku górnośląskiego i ich potencjału złożowego. Etap I – otwór badawczy Bibiela PIG-1”: 109–113. Narod. Arch. Geol., PIG-PIB, Warszawa [nr kat. NAG 5689/2020].*
- MARKOWIAK M., HABRYN R., 2020 – Przejawy mineralizacji polimetalicznej w strukturze elewacji Brudzowic (Siewierza) na bloku górnospolskim (południowa Polska). *Przegląd Geologiczny*, **68**, 6: 511–525.
- MARTIN F., 1968 – Les acritarches de l’Ordovicien et Silurien Belges. *Bulletin de l’Institut Royal des Sciences Naturelles de Belgique, Mém.*, **160**: 1–175.
- MARTIN F., 1972 – Les acritarches de l’Ordovicien inférieur de la Montagne Noire (Hérault, France). *Bulletin de l’Institut Royal des Sciences Naturelles de Belgique Sciences de la Terre*, **48**, 10: 1–72.
- MARTIN F., 1983 – Chitinozaires et Acrithches Ordoviciens de la plate-forme du Saint-Laurent (Québec et sud-est de l’Ontario). *Geological Survey of Canada, Bulletin*, **310**: 1–59.
- MARTIN F., DEAN W.T., 1981 – Middle and Upper Cambrian and Lower Ordovician acritarchs from Random Island, eastern Newfoundland. *Geological Survey of Canada, Bulletin*, **343**: 1–43.

- MARTIN F., DEAN W.T., 1988 – Middle and Upper Cambrian acritach and trilobite zonation at Manuels River and Random Island, eastern Newfoundland. *Geological Survey of Canada, Bulletin*, **381**: 1–91.
- MASIAK M., PODHALAŃSKA T., STEMPIEŃ-SAŁEK M., 2003 – Ordovician-Silurian boundary in the Bardo Syncline (Holy Cross Mountains) – new data on fossil assemblages and sedimentary succession. *Geological Quarterly*, **47**, 4: 311–329.
- MASIAK M., STEMPIEŃ-SAŁEK, M., VECOLI, M., 2002 – The recovery of organic-walled microphytoplankton after the end-Ordovician crisis; new data from low palaeolatitude localities (East European Platform and Małopolska Terrane, Poland). International Meeting and Work shop of the Commission Internationale de Microflore du Paléozoïque (CIMP), Lille, p. 34.
- MASTELLA L. 1988 – Budowa i ewolucja strukturalna okna tektonicznego Mszany Dolnej, polskie Karpaty Zewnętrzne. *Annales Societatis Geologorum Poloniae*, **58**: 53–173.
- McCARTHY K., ROJAS K., PALMOWSKI D., PETERS K., STANKIEWICZ A., 2011 – Basic petroleum geochemistry for source rock evaluation. *Oilfield Review*, **23**, 2: 32–43.
- MCKAY M.P., WEISLOGEL A.L., FILDANI A., BRUNT R.L., HODGSTON D.M., FLINT S.S., 2015 – U-Pb zircon tuff geochronology from the Karoo Basin, South Africa: Implications of zircon recycling on stratigraphic age controls. *International Geology Review*, **57**: 393–410.
- METTE W., 1989 – Acritarchs from Lower Paleozoic rocks of the western Sierra Morena, SW-Spaine and biostratigraphic results. *Geologia Palaeontologica*, **23**: 1–19.
- MIĘDZYNARODOWA Tabela Stratygraficzna, 2022 – International Stratigraphic Chart, <https://stratigraphy.org/ICSchart/ChronostratChart2022-02.pdf> (dostęp: 29.09.2023).
- MIKULSKI S.Z., MARKOWIAK M., SADŁOWSKA K., CHMIELEWSKI A., ZIELIŃSKI G., 2015 – Pilotowe badania pierwiastków ziem rzadkich (REE) w strefie kontaktu bloku górnośląskiego z blokiem małopolskim. *Bulletyn Państwowego Instytutu Geologicznego*, **465**: 77–98.
- MIKULSKI S.Z., WILLIAMS I.S., MARKOWIAK M. 2019 – Carboniferous-Permian magmatism and Mo-Cu (W) mineralization in the contact zone between the Małopolska and Upper Silesia Blocks (south Poland): an echo of the Baltica-Gondwana collision. *International Journal of Earth Sciences*, **108**: 1467–1492.
- MILLER, J.S., MATZEL, J.E.P., MILLER, C.F., BURGESS, S.D., MILLER, R.B., 2009 – Zircon growth and recycling during the assembly of large, composite arc plutons. *Journal of Volcanology and Geothermal Research*, **167**: 282–299. Doi: 10.1016/j.jvolgeores.2007.04.019.
- MILLWARD D., MOLYNEUX S.G., 1992 – Field and biostratigraphic evidence for an unconformity at the base of the Eycott Volcanic Group in the English Lake District. *Geological Magazine*, **128**: 77–92.
- MIN K.W., RENNE P.R., HUFF W.D., 2001 –  $^{40}\text{Ar}/^{39}\text{Ar}$  dating of Ordovician K-bentonites in Laurentia and Baltoscandia. *Earth and Planetary Science Letters*, **185**: 121–134.
- MOCZYDŁOWSKA M., 1991 – Acritarch biostratigraphy of the Lower Cambrian and the Precambrian-Cambrian Boundary in southeastern Poland. *Fossils and Strata*, **29**: 1–127.
- MOCZYDŁOWSKA M., 2005 – Taxonomic review of some Ediacaran acritarchs from the Siberian Platform. *Precambrian Research*, **136**: 283–307.
- MOCZYDŁOWSKA M., 2008a – The Ediacaran microbiota and the survival of Snowball Earth conditions. *Precambrian Research*, **167**: 1–15.
- MOCZYDŁOWSKA M., 2008b – New records of the late Ediacaran microbiota from Poland. *Precambrian Research*, **167**: 71–92.
- MOCZYDŁOWSKA M., VIDAL G., RUDAVSKAYA V.A., 1993 – Neoproterozoic (Vendian) phytoplankton from Syberian Platform, Yakutia. *Paleontology*, **36**: 495–521.
- MOFFET J.W., 1990 – Microbially mediated cerium oxidation in sea water. *Nature*, **345**: 421–423.
- MOLYNEUX S.G., 1990 – Advances and problems in Ordovician palynology of England and Wales. *Journal of the Geological Society*, **147**: 615–618.
- MOLYNEUX S.G., 2009 – Acritarch (marine microphytoplankton) diversity in an Early Ordovician deep-water setting (Skiddaw Group, northern England): Implications for the relationship between sea-level change and phytoplankton diversity. *Palaeogeography, Palaeoclimatology, Palaeoecology*, **275**: 59–76.
- MOLYNEUX S.G., RUSHTON A.W.A. 1988 – The age of the watch Hill Grits (ordovician), English Lake District: Structural and palaeogeographical implications. *Earth and Environmental Science Transactions of The Royal Society of Edinburgh*, **79**: 43–69.
- MOORE D.M., REYNOLDS R.C.JR., 1989 – X-Ray diffraction and identification and analysis of clay minerals. Oxford University Press, Oxford.
- MUDIE P.J., MARRET F., GURDEBEKE P.R., HARTMAN J.D., REID P.C., 2021 – Marine dinocysts, acritarchs and less well-known NPP: tintinnids, ostracod and foraminiferal linings, copepod and worm remains. *W: Applications of Non-Pollen Palynomorphs: from Palaeoenvironmental Reconstructions to Biostratigraphy* (red. F. Marret i in.). *Geological Society, London, Special Publications*, **511**: 159 – 232.
- MURRAY R.W., 1994 – Chemical criteria to identify the depositional environment of chert: general principles and applications. *Sedim. Geol.*, **90**, 3/4: 213–232.
- MURRAY R.W., BUCHHOLTZ TEN BRINK M.R., JONES D.L., GERLACH D.C., PRICE RUSS III G., 1990 – Rare earth elements as indicators of different marine depositional environments in chert and shale. *Geology*, **18**, 3: 268–271.
- NANCE R.D., MURPHY J.B., KEPPIE J.D., 2002 – A Cordilleran model for the evolution of Avalonia. *Tectonophysics*, **352**: 11–31.
- NANCE R.D., GUTIÉRREZ-ALONSO G., KEPPIE J.D., LINNEMANN U., MURPHY J.B., QUESADA C., STRACHAN R.A., WOODCOCK N.H., 2012 – A brief history of the Rheic Ocean. *Geoscience Frontiers*, **3**: 125–135.
- NAWRICKI J., POPRAWA P., 2006 – Development of Trans-European Suture Zone in Poland: from Ediacaran rifting to Early Palaeozoic accretion. *Geological Quarterly*, **50**, 1: 59–76.

- NAWROCKI J., SZULC J., 2000 – The Middle Triassic magnetostratigraphy from the Peri-Tethys basin in Poland. *Earth and Planetary Science Letters*, **182**: 77–92.
- NAWROCKI J., FANNING M., LEWANDOWSKA A., POLE-CHÓNSKA O., WERNER T., 2008 – Palaeomagnetism and the age of the Cracow volcanic rocks (southern Poland). *Geophysical Journal International*, **174**: 475–488.
- NAWROCKI J., KRZEMIŃSKI L., PAŃCZYK M., 2010 – 40Ar-39Ar ages of selected rocks and minerals from the Kraków-Lubliniec Fault Zone, and their relation to the Paleozoic structural evolution of the Małopolska and Brunovistulian Terranes (S Poland). *Geological Quarterly*, **54**, 3: 289–300.
- NAWROCKI J., ŹYLINSKA A., BUŁA Z., GRABOWSKI J., KRZYWIEC P., POPRAWA P., 2004 – Early Cambrian location and affinities of the Brunovistulian terrane (Central Europe) in the light of palaeomagnetic data. *Journal of the Geological Society*, **161**: 513–522.
- NESBITT H.W., YOUNG G.M., 1982 – Early Proterozoic climates and plate motions inferred from major element chemistry of lutites. *Nature*, **299**: 715–717.
- NESBITT H.W., YOUNG G.M., 1984 – Prediction of some weathering trends of plutonic and volcanic rocks based on thermodynamic and kinetic considerations. *Geochimica et Cosmochimica Acta*, **48**, 7: 1523–1534.
- ORIANS K.J., BRULAND K.W., 1986 – The biogeochemistry of aluminum in the Pacific Ocean. *Earth and Planetary Science Letters*, **78**, 4: 397–410.
- OSZCZEPAŁSKI S., MARKOWIAK M., MIKULSKI S.Z., LASOŃ K., BUŁA Z., HABRYN R., 2010 – Porfirowa mineralizacja Mo-Cu-W w utworach prekambryjsko-paleozoicznych – analiza prognostyczna strefy kontaktu bloków górnouśląskiego i małopolskiego. *Buletyn Państwowego Instytutu Geologicznego*, **439**: 339–354.
- PETTIJOHN F.J., 1975 – Sedimentary rocks. Harper & Row Publications, New York.
- PACZEŃSKA J., 2005 – Środowiska sedymentacji dolnokambryjskich osadów bloku górnouśląskiego. W: Mat. konf. 76 Zjazdu PTG „Geologia i zagadnienia ochrony środowiska w regionie górnouśląskim”. Rudy k. Rybnika, 14–16.09.2005 r.: 90–99.
- PACZEŃSKA J., 2008 – Środowiska depozycji osadów klastycznych dewonu środkowego. W: Jamno IG 1, Jamno IG 2, Jamno IG 3 (red. H. Matyja). *Profile Głębokich Otworów Wiertniczych Państwowego Instytutu Geologicznego*, **124**: 165–173.
- PACZEŃSKA J., 2010 – The evolution of late Ediacaran riverine-estuarine system in the Lublin-Podlasie slope of the East-European Craton, southeastern Poland. *Polish Geological Institute Special Papers*, **27**: 1–96.
- PAN Y., ZHU R., BANNERJEE S.K., GILL J., WILLIAMS Q., 2000 – Rock magnetic properties related to thermal treatment of siderite: behavior and interpretation. *Journal of Geophysical Research*, **105**, b1: 783–794.
- PAŃCZYK M., MARKOWIAK M., ZIELIŃSKI G., GIRO L. 2012 – Mineralizacja kruszcowa w obrębie zmetasomatyzowanej intruzji magmowej w rejonie Koziegłów (blok górnouśląski). *Buletyn Państwowego Instytutu Geologicznego*, **448**, 2: 359–370.
- PARSON M.G., ANDERSON M.M., 2000 – Acritarch microfloral succession from the Late Cambrian and Ordovician (Early Tremadoc) of Random Island, eastern Newfoundland, and its comparison to coeval microflora, particularly to those of the East European Platform. *American Association of Stratigraphic Palynologists Foundation Contribution Series*, **38**: 1–123.
- PASSCHIER C.W., TROUV R.A.J., 2005 – Microtectonics. Springer Verlag, Berlin.
- PETTIJOHN F.J., 1975 – Sedimentary rocks. Harper & Row Publications, New York.
- PETTIJOHN F.J., POTTER P.E., SIEVER R., 1972 – Sand and sandstone. Springer-Verlag, New York.
- PIECZONKA J., 2010 – Polymetallic mineralization in Triassic strata of the NW part of the Kraków-Częstochowa Monocline. *Mineralogia*, **41**, 1/2: 35–53.
- PLAYFORD G., MARTIN F., 1984 – Ordovician acritarchs from the Canning Basin, Western Australia. *Alcheringa*, **8**, 3: 187–223.
- PLAYFORD G., RIBECAI C., TONGIORGI M., 1995 – Ordovician acritarch genera *Peteinosphaeridium*, *Lilosphaeridium* and *Cycloplosphaeridium*: morphology, taxonomy, biostratigraphy, and paleogeographic significance. *Bollettino della Società Paleontologica Italiana*, **34**, 1: 3–54.
- PLAYFORD G., WICANDER R., 1988 – Acritarch palynoflora of the Coolibah Formation (Lower Ordovician), Georgina Basin, Queensland. *Memoirs of the Association of Australasian Palaeontologists*, **5**: 5–40.
- PODHALAŃSKA T., 2009 – Północnoświdnickie zlodowacenie Gondwany – zapis zmian środowiskowych w sukcesji osadowej obniżenia bałtyckiego. *Prace Państwowego Instytutu Geologicznego*, **193**: 1–96.
- POLAŃSKI A., 1988 – Podstawy geochemii. Wydaw. Geol., Warszawa.
- POREBSKI S., 1995 – Facies architecture in a tectonically-controlled incised-valley estuary: La Meseta Formation (Eocene) of Seymour Island, Antarctic Peninsula. *Studia Geologica Polonica*, **107**: 1077–1097.
- POTTER T.L., PEDDER B.E., FEIST-BURKHARDT S., 2012 – Cambrian Furongian Series acritarchs from the Comley area, Shropshire, England. *Journal of Micropalaeontology*, **31**: 1–28.
- POŻARYSKI W., 1990 – Kaledonidy środkowej Europy – orogenem przesuwczym złożonym z terranów. *Przegląd Geologiczny*, **38**: 1–8.
- POŻARYSKI W., TOMCZYK H., 1993 – Przekrój geologiczny przez Polskę południowo-wschodnią. *Przegląd Geologiczny*, **10**: 687–695.
- PRICE N.J., COSGROVE J.W., 1990 – Analysis of geological structures. Cambridge University Press.
- QUINTAVALLE M., PLAYFORD G., 2002a – Palynostratigraphy of Quintavalle strata, Canning Basin, Western Australia. Part one: acritarchs and prasinophytes. *Palaeontographica Abteilung B*, **275**: 1–88.
- QUINTAVALLE M., PLAYFORD G., 2002b – Palynostratigraphy of Quintavalle strata, Canning Basin, Western Australia. Part two: chitinozoans and biostratigraphy. *Palaeontographica Abteilung B*, **275**: 89–131.

- QUINTAVALLE M., TONGIORGI M., GEATANI M., 2000 – Lower to Middle Ordovician acritarchs and chitinozoans from northern Karakorum Mountains, Pakistan. *Rivista Italiana di Paleontologia e Stratigrafia*, **106**: 3–18.
- RAEVSKAYA E., 1999 – Early Arenig acritarchs from the Leetse Formation (St. Petersburg region, northwest Russia) and their palaeogeographic significance. In: Tongiorgi M., Playford G., (eds): Studies in Palaeozoic palynology. Selected paper from the CIMP Symposium at Pisa, 1998. *Bollettino della Società Paleontologica Italiana*, **38**, 2/3: 247–256.
- RAEVSKAYA E., VECOLI M., BEDNARCYK W., TONGIORGI M., 2004 – Billingen (Lower Arenig/Lower Ordovician) acritarchs from the East European Platform and their palaeobiogeographic significance. *Lethaia*, **37**: 97–111.
- RAEVSKAYA E., 2005 – Diversity and distribution of Cambrian acritarchs from the Siberian and East-European platform – generalized scheme. *W: Pre-Cambrian to Palaeozoic palaeopalyontology and palaeobotany* (red. P. Steemans, E. Javaux). *Carnets de Géologie - Notebooks on Geology*, Brest, Memoir 2005/02. DOI:10.4267/2042/4361
- RAILSBACK L.B., GIBBARD P.L., HEAD M.J., VOARINTSOA N.R.G., TOUCANNE S., 2015 – An optimized scheme of lettered marine isotope substages for the last 1.0 million years, and the clathrostratigraphic nature of isotope stages and substages. *Quaternary Science Reviews*, **111**: 94–106.
- RAMSAY J. G., HUBER M. I., 1983 – The techniques of modern structural geology. V. 1. Strain analysis. Academic Press, London.
- RAMSAY J. G., HUBER M. I., 1987 – The techniques of modern structural geology. V. 2. Fold and fractures. Academic Press, London.
- RAN B., LIU S., JANS A. L., SUN W., YANG D., YE Y., WANG S., LUO C., ZHANG X., ZHANG C., 2015 – Origin of the Upper Ordovician–lower Silurian cherts of the Yangtze block, South China, and their palaeogeographic significance. *Journal of Asian Earth Sciences*, **108**: 1–17.
- RASUL S.M., 1976 – New species of the genus *Vulcanisphaera* (Acritarcha) from the Tremadocian of England. *Micropaleontology*, **22**, 4: 479–484.
- RAUCHER R., 1971 – Acritarches du Paléozoïque inférieur. *Bulletin du Service de la carte géologique d'Alsace et de Lorraine*, **24**, 4: 291–296.
- RAUCHER R., 1974 – Recherches micropaléontologiques et stratigraphiques dans l'Ordovicien et le Silurien en France. *Sciences Géologiques, bulletins et mémoires*, 1973, **38**: 1–224.
- RIBECAI C., BRUTON D.L., TONGIORGI M., 2000 – Acritarchs from the Ordovician of the Oslo Region, Norway. *Norsk Geologisk Tidsskrift*, **80**, 4: 251–258.
- RIBECAI C., RAEVSKAYA E., TONGIORGI M., 2002 – *Sacculidium* gen. Nov. (Acritarcha), a new representative of the Ordovician Stelomorpha-Tranvikium plexus. *Review of Palaeobotany and Palynology*, **121**, 3/4: 163–203.
- RIBECAI C., TONGIORGI M., 1995 – Arenig acritarchs from Horns Udde (Öland, Sweden): a preliminary report. *Review of Palaeobotany and Palynology*, **86**: 1–11.
- RICARDS B.R., BOOTH G.A., PARIS F., HEWARD A.P., 2010 – Marine flooding events of the Early and Middle Ordovician of Oman and the United Arab Emirates and their graptolite, acritarch and chitinozoan associations. *GeoArabia*, **15**: 81–120.
- RICHARDSON J.B., McGREGOR D.C., 1986 – Silurian and Devonian spore zones of the Old Red Sandstone Continent and adjacent regions. *Bulletin, Geological Survey of Canada*, **364**: 1–79.
- RIDING H.G., 1996 – Sedimentary environments. Blackwell Science, Oxford.
- RIDING J.B., 2021 – A guide to preparation protocols in palynology. *Palynology*, **45**: 1–110.
- RIEDEL W., 1929 – Zur Mechanik geologischer Brucherscheinungen. *Zentralblatt für Mineralogie, Geologie und Paläontologie*, **8**: 354–368.
- RIMMER S., 2004 – Geochemical paleoredox indicators in Devonian-Mississippian black shales, Central Appalachian Basin (USA). *Chemical Geology*, **206**, 3/4: 373–391.
- ROCHETTE P., 1988 – Inverse magnetic fabric in carbonate-bearing rocks. *Earth and Planetary Science Letters*, **90**: 229–237.
- ROLPH T.C., SHAW J., HARPER T.R., HAGAN T., 1995 – Viscous remanent magnetization: a tool for orientation of drill cores. *W: Paleomagnetic applications in hydrocarbon exploration and production* (red. P. Turner, Turner). *Geological Society Special Publications*, **98**: 239–243.
- ROMANEK A., 2009 – Szczegółowa Mapa Geologiczna Polski 1: 50 000 ark. Koziegłowy (878) reambulacja. Narod. Arch. Geol. PIG-PIB, Warszawa.
- ROMANEK A., 2020 – Objasnenia do Szczególowej Mapy Geologicznej Polski 1: 50 000 ark. Koziegłowy (878) reambulacja. Narod. Arch. Geol. PIG-PIB, Warszawa.
- RUBINSTEIN C.V., 2003 – Ordovician acritarchs from northwestern Argentina: new insights into the biostratigraphy and palaeoenvironmental aspects of the Central Andean Basin and Famatina. *W: Ordovician of the Andes* (red. G.L. Albanesi i in.). *INSUGE Serie Correlacion Geologica*, **17**: 125–130.
- RUBINSTEIN C.V., MÁNGANO M.G., BUATOIS L.A., 2003 – Late Cambrian acritarchs from the Santa Rosita Formation: implications for the Cambrian-Ordovician boundary in the Eastern Cordillera of northwest Argentina. *Revista Brasileira de Paleontologia*, **6**: 43–48.
- RUBINSTEIN C.V., TORO B.A., WAISFELD B.G., 1999 – Acritarch biostratigraphy of the upper Tremadoc-Arenig of the Eastern Cordillera, northwestern Argentina: relationship with graptolite and trilobite faunas. *Bollettino della Società Paleontologica Italiana*, **38**: 1–6.
- RUBINSTEIN C.V., TORO B.A., 2001 – Review of acritarch biostratigraphy in the Arenig of Eastern Cordillera, northwestern Argentina. New data and calibration with the graptolite zonation. *W: Contributions to Geology and Palaeontology of Gondwana in honour of Helmut Wopfner* (red. R.H. Weiss): 421–439. Geological Institute, University of Cologne, Germany.
- RYKA W., MALISZEWSKA A., 1991 – Słownik petrograficzny. Wydaw. Geol., Warszawa.
- SAGEMAN B.B., LYONS T.W., 2003 – Geochemistry of fine-grained sediments and sedimentary rocks. *W: Treatise on Geochemistry* (red. H.D. Holland, K.K. Turekian): 115–158. Vol. 7: Sediments, Diagenesis, and Sedimentary Rocks (red. F.T. MacKenzie). Elsevier Pergamon, Oxford.

- SAMBIDGE M.S., COMPSTON W., 1994 – Mixture modeling of multi-component data sets with application to ion-probe zircon ages. *Earth and Planetary Science Letters*, **128**: 373–390.
- SAMSONOWICZ J., 1928 – Lamprofiry okolic Iwanisk w Łysogórzach i okolic Siewierza. *Posiedzenia Naukowe Państwowego Instytutu Geologicznego*, **19/20**: 38–39.
- SARJEANT W.A.S., STANCLIFFE R., 1994 – The Michrystridium and Veryhachium complexes (Acritarcha: Acanthomorphitae and Polygonomorphitae): a taxonomic reconsideration. *Micropaleontology*, **40**: 1–77.
- SELL B., AINSAAR L., LESLIE S., 2013 – Precise timing of the Late Ordovician (Sandbian) super-eruptions and associated environmental, biological, and climatological events. *Journal of Geological Society*, **170**: 711–714.
- SERGEEV V.N., 2006 – The importance of the Precambrian microfossils for modern biostratigraphy. *Paleont. J.*, **40**: 664–673.
- SERVAIS T., STRICANNE L., VECOLI M., WICANDER R., 2004 – Acritarchs. *W: The Great Ordovician Biodiversification Event* (red. Webby B.D. i in.): 348–360. Columbia University Press, New York.
- SERVAIS T., MOLYNEUX S.G., LI J., NOWAK H., RUBINSTEIN C.V., VECOLI M., WANG W.H., YAN K., 2018 – First Appearance Datums (EADs) of selected acritarchs taxa and correlation between Lower and Middle Ordovician stages. *Lethaia*, **51**: 228–253.
- SHCHERBACHEV D.K., TRUBKIN N.V., KONONKOVA N.N., 2002 – Sulfide mineralization in high-alkaline pegmatites of the Koashva deposit (Khibiny massif, Kola Peninsula). *Geology of Ore Deposits*, **44**: 385–395.
- SHOLKOVITZ E.R., LANDING W.M., LEWIS B.L., 1994 – Ocean particle chemistry: The fractionation of rare earth elements between suspended particles and seawater. *Geochimica et Cosmochimica Acta*, **58**, 6: 1567–1579.
- SIBSON R.H., 1977 – Fault rocks and fault mechanisms. *Journal of Geological Society*, **133**: 191–213. Doi:10.1144/gsjgs.133.3.0191
- SIBSON R.H., 1996 – Structural permeability of fluid-driven fault-fracture meshes. *Journal of Structural Geology*, **18**: 1031–1042. Doi:10.1016/0191-8141(96)00032-6.
- SIBSON R.H., 2000 – Fluid involvement in normal faulting. *Journal of Geodynamics*, **29**: 469–499. Doi:10.1016/S0264-3707(99)00042-3.
- SIKORA R., PIOTROWSKI A., HABRYN R., 2015 – The optical core scanner DMT CoreScan3 – a tool for structural and petrographical core studies and for gathering geological information. *Mineralogia Special Papers*, **44**: 92.
- SIKORSKA M., 2007 – Geneza wapieni i cementów węglanowych piaskowców w kambrze obniżenia bałtyckiego. *Przegląd Geologiczny*, **55**, 4: 304.
- SIKORSKA M., 2009 – Uncommon calcite crystals In Cambrian and Ordovician limestones from onshore and offshore Northern Poland-evidence from CL. LPI Contribution, Nr 1473 Program and Abstract Volume. Lunar and Planetary Institute.
- SIRCOMBE K.N., 2004 – AgeDisplay: an EXCEL workbook to evaluate and display univariate geochronological data using binned frequency histograms and probability density distributions. *Computers and Geosciences*, **30**: 21–31.
- SŁABY E., BREITKREUZ C., ŹABA J., DOMAŃSKA-SIUDA J., GAIDZIK K., FALENTY K., FALENTY A., 2010 – Magma generation in an alternating transtensional-transpressional regime, the Kraków-Lubliniec Fault Zone, Poland. *Lithos*, **119**, 3/4: 251–268.
- SMITH D.G.W., NICKEL E.H., 2007 – A system of codification for unnamed minerals: Report of the Subcommittee for Unnamed Minerals of the IMA Commission on New Minerals, Nomenclature and Classification. *The Canadian Mineralogist*, **45**: 983–1055.
- STAPLIN F.L., Jansonius j., POCOCK S.A.J., 1965 – Evaluation of some acritarchous hystrichosphere genera. *Neues Jahrbuch für Geologie und Paläontologie, Abhandlungen*, **123**: 167–201.
- STEMPIEŃ M., 1990 – Ordovician and Silurian acritarchs of the Niestachów Sandstone Formation (Góry Świętokrzyskie Mountains). *Annales Societatis Geologorum Poloniae*, **60**: 59–74.
- STEMPIEŃ-SAŁEK M., 2011 – Palynomorph assemblages from the Upper Ordovician in northern and central Poland. *Annales Societatis Geologorum Poloniae*, **81**: 21–61.
- STOW D.A.V., READING H.G., COLLINSON J.D., 1996 – Deep Seas. *W: Sedimentary Environments: Processes, Facies and Stratigraphy* (red. H.D. Reading): 395–453. Blackwell Science Ltd. Editorial Offices.
- STREEL M., HIGGS K., LOBOZIAK S., RIEGEL W., STEEMANS P., 1987 – Spore stratigraphy and correlation with faunas and floras in the type marine Devonian of the Ardenne-Rhenish region. *Review of Palaeobotany and Palynology*, **50**: 211–229.
- STROTHER P.K., 1996 – Acritarchs. *W: Palynology: Principles and applications*, vol. 1 (red. J. Jansonius, D.C. McGregor): 81–106. AASP Foundation, Dallas.
- SUN S.S., McDONOUGH W.F., 1989 – Chemical and isotopic systematics of oceanic basalts: implications for mantle composition and processes. *W: Magmatism in ocean basins* (red. A.D. Saunders, M.J. Norry). *Geological Society, London, Special Publications*, **42**: 313–345.
- SWEENEY J.J., BURNHAM A.K., 1990 – Evaluation of a Simple Model of Vitrinite Reflectance Based on Chemical Kinetics. *AAPG Bulletin*, **74**, 10: 1559–1570.
- SZANIAWSKI H., 1996 – Scolecodonts. *W: Palynology: Principles and applications*, vol. 1 (red. J. Jansonius, D.C. McGregor): 337–354. AASP Foundation, Dallas.
- SZCZEPANIK Z., 2000 – The Ordovician acritarchs of the Pomeranian Caledonides and their foreland – similarities and differences. *Geological Quarterly*, **44**, 3: 275–295.
- SZCZEPANIK Z., 2002 – Następstwo stratygraficzne głównych zespołów akritarchowych w ordowiku Górz Świętokrzyskich. *Posiedzenia Naukowe Państwowego Instytutu Geologicznego*, **59**: 96–98.
- SLIWIŃSKI S., 1960 – Skały wulkaniczne i dolomityzacja wapieni dewońskich w Dziewkach (koło Siewierza). *Rudy i Metale Nieżelazne*, **5**, 11: 474–478.

- ŚLIWIŃSKI S., GŁADYSZ J., 1996 – Przejawy mineralizacji cynkowo-ołowiowej w utworach triasu i dewonu, na obszarze Bibiela-Zendek. *Rudy i Metale Nieżelazne*, **41**, 7: 308–313.
- ŚRODON J., 1996 – Minerały ilaste w procesach diagenezy. *Przegląd Geologiczny*, **44**, 6: 604–607.
- ŚRODON J., 2007 – Illitization of smectite and history of sedimentary basins. W: Proceedings of the 11th EUROCLAY Conference, Aveiro, Portugal: 74–82.
- TAPPAN H., LOEBLICH A.R., 1971 – Surface sculpture of the wall in Lower Paleozoic acritarchs. *Micropaleontology*, **17**, 4: 385–410.
- TARLING D.H., HROUDA F., 1993 – The magnetic anisotropy of rocks. Chapman & Hall, London, 217 pp.
- TESSIER B., 1993 – Upper intertidal rhythmites in the Mont-Saint-Michel Bay (NW France): perspectives for paleoreconstruction. *Marine Geology*, **110**, 3/4: 355–367.
- TESSIER B., ARCHER A.W., LANIER W.P., FELDMAN H.R., 1995 – Comparison of ancient tidal rhythmites (Carboniferous of Kansas Indiana, USA) with modern analogues (the Bay of Mont-Saint-Michel, France). *Special Publications of the International Association of Sedimentologists*, **24**: 259.
- TIMOFEEV B.V., 1959 – Drevnesaja flora Pribaltiki i ee Stratigraficeskoe znacenie. *Trudy VNIGRI*, **129**: 1–319.
- TONGIORGI M., DI MILLA A., 1999 – Differentiation and spread of the Baltic Acritarch Provence (Arenig-Llanvirn). W: Studies in Palaeozoic palynology (red. M. Tongiorgi, G. Playford). Selected paper from the CIMP Symposium at Pisa, 1998. *Bollettino della Società Paleontologica Italiana*, **38**, 2/3: 297–312.
- TONGIORGI M., DI MILLA A., LE FORT P., GAETANI M., 1994 – Palynological dating (Arenig) of the sedimentary sequence overlying the Ishkarwaz Granite (upper Yarkhun valley, Chitral, Pakistan). *Terra Nova*, **6**: 595–607.
- TONGIORGI M., YIN L., DI MILIA A., 1995 – Arenigian Acritarchs from the Daping Section (Yangtze Gorges area, Hubei Province, Southern China) and their palaeogeographic significance. *Review of Palaeobotany and Palynology*, **86**, 1/2: 13–48.
- TONGIORGI M., YIN L., DI MILIA A., 2003 – Lower Yushanian to lower Zhejiangian palynology of the Yangtze Georges area (Daping and Huanghuachang section), Hubei Province, South China. *Palaeontographica, Abt. B: Paläophytologie*, **266**: 1–160.
- TRAVERSE A., 2008 – Paleopalynology. *Topics in geobiology*, **28**.
- TRELA W., SZCZEPANIK Z., 2009 – Litologia i zespół akritarchowy formacji z Zalesia w Górzach Świętokrzyskich na tle zmiennego poziomu morza i paleogeografii późnego ordowiku. *Przegląd Geologiczny*, **57**, 2: 147–157.
- TRELA W., BĄK E., PAŃCZYK M., 2017 – Upper Ordovician and Silurian ash beds in the Holy Cross Mountains, Poland: preservation in mudrock facies and relation to atmospheric circulation in the Southern Hemisphere. *Journal of the Geological Society*, **175**, 2: 352–360.
- TRELA W., SZCZEPANIK Z., SALWA S., 2001 – The Ordovician rocks of Pobroszyn in Łysogóry region of the Holy Cross Mountains, Poland. *Geological Quarterly*, **45**, 2: 29–40.
- TRIBOVILLARD N., ALGEO T.J., LYONS T., ROBOULEAU A., 2006 – Trace metals as paleoredox and paleoproduction proxies: An update. *Chemical Geology*, **232**, 1/2: 12–32.
- TRYTHALL R.J.B., ECCLES C., MOLYNEUX S.G., TAYLOR W.E.G., 1987 – Age and controls of ironstone deposition (Ordovician) North Wales. *Geological Journal*, **22**: 31–43.
- TUCKER M.E., 2001 – Sedimentary petrology. Blackwell Publishing, Oxford.
- TURNER R.E., 1984 – Acritarchs from the type area of the Ordovician Caradoc Series, Shropshire, England. *Palaeontographica B*, **190**, 4/6: 87–157.
- TURNER R.E., 1985 – Acritarchs from the type area of the Ordovician Llandeilo series, South Wales. *Palynology*, **9**: 211–234.
- TWISS R.J., MOORES E.M., 1992 – Structural geology. Freeman, New York.
- TYNNI R., 1975 – Ordovician hystrichospheres and chitinozoans in limestone from Bothnian Sea. *Bulletin Geological Survey of Finland*, **279**: 1–59.
- TYNNI R., 1982 – On Paleozoic microfossils in clastic dykes on the Åland Islands and core samples of Lumparn. *Bulletin Geological Survey of Finland*, **317**: 35–94.
- TYNNI R., 1995 – Ordovician hystrichospheres and chitinozoans in limestone from the Bothnian Sea. *Bulletin Geological Survey of Finland*, **279**: 1–59.
- TYSON R.V., 1993 – Palynofacies analysis. W: Applied Micropaleontology (red. D.G. Jenkins): 153–191. Kluwer Academic Publishers.
- UUTELA A., 1989 – Age and dispersal of sedimentary erratics on the coast of southwestern Finland. *Bulletin Geological Survey of Finland*, **349**: 1–100.
- UUTELA A., 1998 – Extent of the northern Baltic Sea during the Early Palaeozoic Era – new evidence from Ostrobothnia, western Finland. *Bulletin of the Geological Society of Finland*, **70**: 1–2.
- UUTELA A., TYNNI R. 1991 – Ordovician acritarchs from the Rapla borehole, Estonia. *Bulletin Geological Survey of Finland*, **353**: 1–135.
- VANGUESTAINE M., 1974 – Espèces zonales d’Acritarches du Cambro-Trémadocien de Belgique et de l’Ardenne Française. *Review of Palaeobotany and Palynology*, **18**: 63–82.
- VAVRDOVÁ M., 1966 – Palaeozoic microplankton from Central Bohemia. *Časopis pro Mineralogii a Geologii*, **11**, 4: 409–414.
- VAVRDOVÁ M., 1993 – Acritarch Assemblages in the Arenig Series of the Prague Basin, Czech Republic. W: Contributions to acritarch and chitinozoa research (red. S.G. Molyneux, K.G. Dorning). *Special Papers in Palaeontology*, **48**: 125–139.
- VECOLI M., 1996 – Stratigraphic significance of acritarchs in cambro-Ordovician boundary strata, Hassi-Rmel area, Algerian Sahara. *Bollettino della Società Paleontologica Italiana*, **35**: 3–58.
- VECOLI M., 1999 – Cambro-Ordovician palynostratigraphy (acritarchs and prasinophytes) of the Hassi-R'Mel area and northern Rhadames Basin, North Africa. *Palaeontographia Italica*, **86**.
- VECOLI M., TONGIORGI M., ABDESELAM-ROUGH F.F., BENZARTI R., MASSA D., 1999 – Palynostratigraphy of Upper Cambrian-upper Ordovician intracratonic clastic sequence, North Africa. W: Studies in palaeozoic palynology (red. M. Tongiorgi, G. Playford). Selected papers from CIMP Sym-

- posium at Pisa, 1998. *Bulletino della Società Paleontologica Italiana*, **38**: 331–341.
- VIDAL G., 1990 – Giant acanthomorph acritarchs from the upper Proterozoic in southern Norway. *Palaeontology*, **33**: 287–298.
- VOLKOVA N.A., 1968 – Akritarkhi dokembrijskikh i nizhnekembrijskikh otlozhenij Estonii. (In Russian). *W: Problematika pogranichnykh sloev rifeya i kembriya Russkoy platformy, Urala i Kazakhstana* (red. N.A. Volkova i in.). *Nauka, Moskwa*: 8–36.
- VOLKOVA N.A., 1990 – Akritarkhi srednego i verkhnego kembriya vostochno-evropejskoy platformy (in Russian). *Nauka, Moskwa*: 1–115.
- VOLKOVA N.A., KIRJANOV V.V., 1995 – Regionalnaja stratigrapheskaja skheme sredn-verhnekembrijskikh otlozhenij vostochno-evropejskoj platformy. *Stratigraphy and Geological Correlation*, **3**, 5: 66–74.
- VOROB'EVA N. G., SERGEEV V. N., CHUMAKOV N. M., 2008 – New Finds of Early Vendian Microfossils in the Ura Formation: Revision of the Patom Supergroup Age, Middle Siberia. *Doklady Akademii Nauk*, **419**: 782–787.
- WEDEPOHL K.H., 1971 – Environmental influences on the chemical composition of shales and clays. *W: Physics and Chemistry of the Earth* (red. L.H. Ahrens i in.): 305–333. Pergamon, Oxford, New York.
- WEDEPOHL K.H., 1991 – The composition of the upper earth's crust and the natural cycles of selected metals. Metals in natural raw materials. Natural resources. *W: Metals and Their Compounds in the Environment I* (red. E. Merian): 3–17. Verlag Chemie, Weinheim.
- WEDEPOHL K.H., 2004 – The Composition of Earth's Upper Crust, Natural Cycles of Elements, Natural Resources. *W: Elements and Their Compounds in the Environment. Occurrence, Analysis and Biological Relevance, Volume 1* (red. E. Merian i in.): 3–16. Wiley-Verlag Chemie, Weinheim.
- WELSCH M., 1986 – The acritarchs of the Upper Digermul Group, Middle Cambrian to Tremadoc, eastern Finnmark, northern Norway. *Palaeontographica Abt. B*, **201**: 1–109.
- WIEDENBECK M., ALLÉ P., CORFU F., GRIF FIN W.L., MEIER M., OBERLI F., VON QUADT A., RODDICK J.C., SPIEGEL W., 1995 – Three natural zircon standards for U-Th-Pb, Lu-Hf, trace-element and REE analyses. *Geostandards News Letter*, **19**: 1–23.
- WIEDENBECK M., HANCHAR J.M., PECK W.H., SYLVESTER P., VALLEY J., WHITEHOUSE M., KRONZ A., MORISHITA Y., NASDALA L., FIEBIG J., FRANCHI I., GIRARD J.-P., GREENWOOD R.C., HINTON R., KITA N., MASON P.R.D., NORMAN M., OGASAWARA M., PICCOLI P.M., RHEDE D., SATOH H., SCHULZ-DOBRICK B., SKÅR Ø., SPICUZZA M.J., TERADA K., TINDLE A., TOGASHI S., VENNEMANN T., XIE Q., ZHENG Y.-F., 2004 – Further characterisation of the 91500 zircon crystal. *Geostandards and Geoanalytical Research*, **28**: 9–39.
- WILDE P., QUINBY-HUNT M.S., ERDTMANN B.-D., 1996 – The whole-rock cerium anomaly: a potential indicator of eustatic sea-level changes in shales of the anoxic facies. *Sedimentary Geology*, **101**, 1/2: 45–53.
- WILLIAMS I.S., CLAESSEN S., 1987 – Isotopic evidence for the Precambrian provenance and Caledonian metamorphism of high grade paragneisses from the Seve Nappes, Scandinavian Caledonides: II Ion microprobe zircon U-Th-Pb. *Contributions to Mineralogy and Petrology*, **97**: 205–217.
- WILSON G., 1982 – Introduction to small-scale geological structures. George Allen & Unwin, London.
- WŁODARCZYK M., DARŁAK B., 2016 – Badania porozometryczne na 36 próbkach skalnych oraz badania gęstości objętościowej i rzeczywistej oraz porowatości całkowitej na 263 próbkach skał wraz z interpretacją wyników badań. Inst. Nafty i Gazu – PIB, Kraków.
- WOLF R., 1980 – The lower Ordovician and upper boundary of the Ordovician System of some selected regions Celtiberia, eastern Sierra Morena in Spain. Part I: the O sequence of Ordovician Celtiberia. *Neues Jahrbuch für Geologie und Paläontologie, Abh.*, **160**, 1: 118–137.
- WOOD G.D., TURNAU E., 2001 – New Devonian coenobial Chlorococcales (Hydrodictyaceae) from the Holy Cross Mountains and Radom-Lublin region of Poland: their paleoenvironmental and sequence stratigraphic implications. *W: Proceedings of the IX International Palynological Congress, Houston, Texas, USA* (red. D.K. Goodman, R.T. Clarke): 53–63. American Association of Stratigraphic Palynologists Foundation.
- WOOD G.D., GABRIEL A.M., LAWSON J.C., 1996 – Palynological techniques – processing and microscopy. *W: Palynology: Principles and Applications* (red. J. Jansonius, D.C. McGregor) 1: 29–50.
- WRONA R., BEDNARCZYK W.S., STEMPIEŃ-SAŁEK M., 2001 – Chitinozoans and acritarchs from the Ordovician of the Skibno 1 borehole, Pomerania, Poland: implications for stratigraphy and paleogeography. *Acta Geologica Polonica*, **51**: 317–331.
- WYCZÓŁKOWSKI J., 1974 – Stratygrafia piaskowca pstrego i dolnego wapienia muszlowego północno-wschodniego obrzeżenia Górnoułańskiego Zagłębia Węglowego w świetle badań paleogeograficznych i sedimentologicznych. *Biuletyn Instytutu Geologicznego*, **278**: 71–114.
- WYGRALA B.P., 1989 – Integrated study of an oil field in the Southern Po-basin, Northern Italy (Ph. D. Thesis): University of Köln (Ber. Forschungszentrum Jülich 2313, 217 pp.).
- YAN K., LI J., MOLYNEUX S.G., RAEVSKAYA E.G., SERVAIS T., 2017 – A review of the Ordovician acritarch genus *Barakella* Cramer & Díez 1977. *Palynology*, **41**, S1: 80–94.
- YIN L.M., 1995 – Early Ordovician acritarchs from Huanjiang region, Jilin, and Yichang region, Hubei, China. *Palaeontologia sinica, Ser. A*, **185**, 12: 1–170.
- YIN L.M., DI MILIA A., TONGIORGI M., 1998 – New and emended acritarch taxa from the lower Dawan Formation (lower Arenig, Huanghuachang Section, South China). *Review of Palaeobotany and Palynology*, **102**, 3/4: 223–248.
- ZHANG Y., YIN., XIAO S., KNOLL A. H., 1998 – Premineralized fossils from the Terminal Proterozoic Doushantuo Formation, South China. *The Paleontological Society Memoir*, **50**: 1–52.
- ZHOU C., XIE G., MCFADDEN K., XIAO S., YUAN X., 2007 – The diversification and extinction of Doushantuo – Pertatataka

- acritarchs in South China: causes and biostratigraphic significance. *Geological Journal*, **42**: 229–262.
- ŻABA J., 1999 – Ewolucja strukturalna utworów dolnopaleozoicznych w strefie granicznej bloków górnośląskiego i małopolskiego. *Prace Państwowego Instytutu Geologicznego*, **156**: 1–142.
- ŻELAŹNIEWICZ A., ALEKSANDROWSKI P., BUŁA Z., KARNKOWSKI P. H., KONON A., OSZCZYPKO N., ŚLĄCZKA A., ŻABA J., ŻYTKO K., 2011 – Regionalizacja tektoniczna Polski. Komitet Nauk Geologicznych PAN, Wrocław.
- ŻELAŹNIEWICZ A., BUŁA Z., FANNING M., SEGHEDI A., ŻABA J., 2009 – More evidence on Neoproterozoic terranes in Southern Poland and southeastern Romania. *Geological Quarterly*, **58**, 1: 93–124.
- ŻELAŹNIEWICZ A., CWOJDZIŃSKI S., 1995 – Pre-Variscan basement rocks in Southern Poland: where is the southeastern margin of Eastern Avalonia (Cadomia?). *Studia Geoph. Geod.*, **39**: 354–363.