

Géologie fondamentale : Bibliographie

Abati J., Aghzer A.M., Gerdes A., Ennih N., 2010. Detrital zircon ages of Neoproterozoic sequences of the Anti-Atlas belt. *Precamb. Res.* 181, 115–128.

Achalhi M., Münch P., Cornée J.J., Azdimousa A., Melinte-Dobrinescu M., Quillévéré F., Drinia H., Fauquette S., Jiménez-Moreno G., Merzeraud G., Ben Moussa A., El Kharim Y., Feddi N., 2016. The late Miocene Mediterranean-Atlantic connections through the North Rifian Corridor: New insights from the Boudinar and Arbaa Taourirt basins (northeastern Rif, Morocco). *Palaeogeography, Palaeoclimatology, Palaeoecology*, 459, 131-152.

Ait Lahna A., Tassinari C.C.G., Youbi N., Admou H., Bouougri E.H., Chaib L., Ernst R.E., Söderlund U., Boumehti A., Bensalah M.K., Aarab E.M., 2016. Refining the stratigraphy of the Taghdout Group by Using the U–Pb Geochronology of the Taghdout Sill (Zenaga inlier, Anti-Atlas, Morocco). *Acta Geologica Sinica (English Ed.)*, 90, 1.

Alia-Medina M., 1971. Geología básica y aplicada: los fosfatos del Sahara español. *Revista Las Ciencias de Madrid*. Año XXXVI N° 1. 18 p. (Biblioteca del IGME)

Amrhar M., 2002. Paléocontraintes et déformation syn- et post-collision Afrique-Europe identifiées dans la couverture mésozoïque et cénozoïque du Haut Atlas occidental (Maroc). *C. R. Geoscience*, 334, 279-285.

Andeweg, B., Cloething, S., 2001. Evidence for an active sinistral shear zone in the western Alboran region. *Terra Nova* 13, 44–50.

Armando G., 1999. Intracontinental alkaline magmatism : Geology, petrography, Mineralogy and geochemistry of the Jebel Hayim Massif (Central High Atlas – Morocco). *Mémoires de Géologies (Lausanne)*, 31, 106 p.

Arribas A., 1968. El Precámbrico del Sahara español y sus relaciones con las series sedimentarias mas modernas. *Boletín Geológico y Minero*. 79, 445-480.

Baidder L., Michard A., Soulaïmani A., Fekkak A., Eddebbi A., Rjimati E.C., Raddi Y., 2016. Fold interference in thick-skinned tectonics; a case study from the Paleozoic Belt of Sub-Saharan Morocco. *Journal of African Earth Sciences*, 119, 204-225.

Balestrieri M. L., Moratti G., Bigazzi G., Algouti A., 2009. Neogene exhumation of the Marrakech High Atlas (Morocco) recorded by apatite fission-track analysis. *Terra Nova*, 21, 75–82.

Barbero, L., Jabaloy A., Gómez-Ortiz D., Pérez-Peña J.V., Rodríguez-Peces M. J., Tejero R., Estupiñán J., Azdimousa A., Vázquez M., Asebriy L., 2011. Evidence for surface uplift of the Atlas Mountains and the surrounding peripheral plateaux: Combining apatite fission-track results and geomorphic indicators in the Western Moroccan Meseta (coastal Variscan Paleozoic basement). *Tectonophysics*, 502, 90–104.

Bargach K., 2011. Les déformations plio-quadernaires dans la partie frontale de la chaîne du Rif (Rides pré-rifaines et bassin du Saïss). Un exemple de la tectonique en coins expulsés. (Thèse de Doctorat) Université Mohammed V, Rabat.

Bargach K., Ruano P., Chabli A., Galindo-Zaldívar J., Chalouan A., Jabaloy A., Akil M., Ahmamou M., Sanz de Galdeano C., Benmakhlouf M., 2004. Recent Tectonic Deformations and Stresses in the Frontal Part of the Rif Cordillera and the Saïss Basin (Fes and Rabat Regions, Morocco). *Pure appl. Geophys.*, 161, 521-540.

Bea, F., Montero, P., Haissen, F., Molina, J.F., Michard, A., Lazaro, C., Mouttaqui, A., Errami, A., Sadki, O., 2015. First evidence for Cambrian rift-related magmatism in the West African Craton Margin: the Derraman Peralkaline Felsic Complex. *Gondwana Research*, 36, 423-438.

Bea, F., Montero, P., Haissen, F., Rjimati, E., Molina, J.F., Scarrow, J.H., 2014. Kalsilite-bearing plutonic rocks: the deep-seated Archean Awsard massif of the Reguibat Rise, South Morocco, West African Craton. *Earth-Science Reviews*, 138, 1-24.

Bea F., Montero P., Haissen F., El Archi A. 2013. 2.46 Kalsilite and nepheline syenites from the Awsard pluton, Reguibat Rise of the West African Craton, Morocco. Generation of extremely K-rich magmas at the Archean-Proterozoic transition. *Precambrian Research*, 224, 242-254.

Bea F., Montero P., Haissen F., Rjimati E., Molina J.F. Scarrow, J.H. 2014. Deep-seated kalsilite-bearing rocks of the Reguibat Rise, West African Craton: The Awsard massif, South Morocco. *Earth-Science Reviews*, 138, 1-24.

Bea F., Montero P., Haissen F., Michard A., Lazaro C., Mouttaqi A., Errami A., & Sadki O. 2016. First Evidence of Cambrian rift-related magmatism in the West African margin: The Derraman Peralkaline Felsic Complex. *Gondwana Research*. 36, 423-438.

- Beauchamp W., Allmendinger R., Barazangi M., Demnati M., El Alji M., Dahmani M., 1999. Inversion tectonics and evolution of the High Atlas Mountains, Morocco, based on geological-geophysical transect. *Tectonics*, 18, 163-184.
- Benabdellouahed M., Klingelhoefer F Gutscher M.-A. Rabineau M. Biari Y. Hafid, M. Duarte J.C, Schnabel M., Baltzer A., Pedoja K., Le Roy P., Reichert C. et Sahabi M., 2017. Recent uplift of the Atlantic Atlas (offshore West Morocco): Tectonic arch and submarine terraces. *Tectonophysics*, 706–707, 46-58. <https://doi.org/10.1016/j.tecto.2017.03.024>
- Benabdellouhaed, M., Baltzer, A., Rabineau, M., Aslanian, D., Sahabi, M., Germond, M., Loubrieu, B., Biari, Y., 2016. Slope morphologies offshore Dakhla (SW Moroccan margin). *Bull. Soc. géol. Fr.*, 187, 27-39.
- Benmakhlouf M., Galindo-Zaldívar J., Chalouan A., Sanz de Galdeano C., Ahmamou M., López-Garrido A.C., 2012. Inversion of transfer faults: the Jebha-Chrafate fault (Rif, Morocco). *J. Afr. Earth Sci.* 73–74, 33–43.
- Bensalah, M.K., Youbi, N., Mata, J., Madeira, J., Martins, L., El Hachimi, H., Bertrand, H., Marzoli, A., Bellieni, G., Doblaz, M., Font, E., Medina, F., Mahmoudi, A., Berraâouz, E.H., Miranda, R., Verati, C., De Min, A., Ben Abbou, M., Zayane, R., 2013. The Jurassic Cretaceous basaltic magmatism of the Oued El-Abid syncline (High Atlas, Morocco): physical volcanology, geochemistry and geodynamic implications. *J. Afr. Earth Sci.*, 81, 60-81.
- Benzaggagh M., Mokhtari A., Rossi P., Michard A., El Maz A., Chalouan A., Saddiqi O., Rjimati EC., 2014. Oceanic units in the core of the External Rif (Morocco): intramargin hiatus or South-Tethyan remnants? *J Geodyn.*, 77, 4-21.
- Bezada, M.J., Humphreys, E.D., Toomey, D.R., Harnafi, M., Dávila, J.D., Gallart, J., 2013. Evidence for slab rollback in westernmost Mediterranean from improved upper mantle imaging, *Earth Planet. Sci. Lett.*, 368, 51-60.
- Blein O., Baudin T., Chèvremont P., Soulaïmani A., Admou H., Gasquet D., Cocherie A., Egal E., Youbi N., Razin Ph., Bouabdelli M., Gombert Ph., 2014a. Geochronological constraints on the polycyclic magmatism in the Bou Azzer-El Graara inlier (central Anti-Atlas Morocco). *J. Afr. Earth Sci.* 99, 287–306.
- Blein O., Baudin T., Soulaïmani A., Cocherie A., Chèvremont P., Admou H., Ouanaïmi H., Hafid A., Razin P., Bouabdelli M., Roger J., 2014b. New geochemical, geochronological and structural

constraints on the Ediacaran evolution of the south Sirwa, Agadir-Melloul and Iguerda inliers, Anti-Atlas, Morocco. *J. Afr. Earth Sci.* 98, 47-71.

Bouabdellah M., Hoernle K., Kchit A., Duggen S., Hauff F., Klügel A., Lowry D. & Beaudoin G., 2010. Petrogenesis of the Eocene Tamazert continental carbonatites (Central High Atlas, Morocco): implications for a common source for the Tamazert and Canary and Cape Verde Island carbonatites. *J. Petrology*, 51, 1655-1686.

Bouougri E.H., Saquaque A., 2004. Lithostratigraphic framework and correlation of the Neoproterozoic northern West African Craton passive margin sequence (Siroua-Zenaga-Bou Azzer El Graara inliers, central Anti-Atlas, Morocco): an integrated approach. *J. Afr. Earth Sci.* 39 (3), 227-238.

Bousquet R., El Mamoun R., Saddiqi O., Goffé B., Möller A., Madi A., 2008. Mélanges and ophiolites during the Pan-African orogeny: the case of the Bou-Azzer ophiolite suite (Morocco). *Geological Society, London. Spec. Publ.* 297, 233-247.

Caby R., Kienast J.R., 2009. Neoproterozoic and Hercynian metamorphic events in the Central Mauritanides: Implications for the geodynamic evolution of West Africa. *J. Afr. Earth. Sci.*, 53, 122-136.

Calais E., DeMets C., Nocquet J.M., 2003. Evidence for a post-3.16-Ma change in Nubia-Eurasia-North America plate motions? *Earth Planet. Sci. Lett.* 216, 81–92.

Chabli A., Chalouan A., Akil, M., Galindo-Zaldívar J., Ruano P., Sanz de Galdeano C., López-Garrido A.C., Marín-Lechado C., Pedrera A., 2014. Plio-Quaternary paleostresses in the Atlantic passive margin of the Moroccan Meseta: influence of the Central Rif escape tectonics related to the Eurasia-Africa plate convergence. *J. Geodyn.* 77, 123-134.

Chalouan A., Michard A., 2004. The Alpine Rif Belt (Morocco): a case of Mountain building in a subduction–subduction–transform Fault Triple Junction. *Pure Appl. Geophys.* 161, 489–519.

Chalouan A., Galindo-Zaldívar J., Akil M., Marín C., Chabli A., Ruano P., Bargach K., Sanz de Galdeano C., Benmakhlouf M., Ahmamou M., Gourari L., 2006. Tectonic wedge expulsion in the southwestern front of the Rif Cordillera (Morocco). In: Moratti, G., Chalouan, A. (Eds.), *Tectonics of the Western Mediterranean and North Africa*. *Geol. Soc. London, Spec. Publ.*, 262, 101– 118.

Chalouan A., Michard A., El Kadiri K., Negro F., Frizon de Lamotte D., Soto J.I., Saddiqi O., 2008. The Rif Belt. In: Michard A., Saddiqi O., Chalouan A., Frizon de Lamotte D. (Eds.), *Continental*

Evolution: The Geology of Morocco; Structure, Stratigraphy and Tectonics of the Africa-Atlantic-Mediterranean Triple Junction. *Lecture Notes in Earth Sci.*, 116, 203–302.

Chalouan A., Michard A., El Kadiri K., Saddiqi O., 2011. Rif central et Nord-Occidental (Central and north-western Rif Belt). In Michard et al. (éds.), *Nouveaux guides géologiques et miniers du Maroc*, Notes Mém. Serv. géol. Maroc, 560, 8-89.

Chalouan A., Gil A. J., Galindo-Zaldivar J., Ahmamou M., Ruano P., Clara de Lacy M., Ruiz-Armenteros A.M., Benmakhlouf M., Riguzzi F., 2014. Active faulting in the frontal Rif Cordillera (Fes region, Morocco): Constraints from GPS data. *J. Geodyn.* 77, 110-122.

Charrière A., Ouarhache D., El-Arabi H., 2011. Le Moyen Atlas (Middle Atlas). In Michard et al. (éds.), *Nouveaux guides géologiques et miniers du Maroc*, Notes Mém. Serv. géol. Maroc, 559, 11-164.

Charrière A., Haddoumi H., Mojon P.-O., Ferrière J., Cuche D. & Zili L., 2009. Mise en évidence par ostracodes et charophytes de l'âge paléocène des dépôts discordants sur les rides anticlinales de la région d'Imilchil (Haut Atlas, Maroc) ; conséquences paléogéographiques et structurales. *C. R. Palevol.*, 8, 9-19.

Charrière A., Haddoumi H., 2016. Les « Couches rouges » continentales jurassico-crétacées des Atlas marocains (Moyen Atlas, Haut Atlas central et oriental) : bilan stratigraphique, paléogéographies successives et cadre géodynamique. *Boletín geológico y minero*, 127 (2/3), 407-430.

Charrière A., 1990. Héritage hercynien et évolution géodynamique alpine d'une chaîne intracontinentale : le Moyen-Atlas au S.E. de Fès, Maroc. Thèse de Doctorat d'Etat, Université de Toulouse.

Choubert, G., Faure-Muret, A., 1962. Evolution du domaine atlasique marocain depuis les temps paléozoïques. In : *Livre à la Mémoire du Professeur Paul Fallot*, Mémoire hors-série Soc. géol. Fr., 1, Paris, 447–527.

Clauer N., 1976. Géochimie isotopique du strontium des milieux sédimentaires. Application à la géochronologie de la couverture du craton ouest africain, *Sci. Géol. Mém. Strasbourg*, 45, 256 p.

Davies J.H.F.L., Marzoli A., Bertrand H., Youbi N., Ernst M., Schaltegger U., 2017. End-Triassic mass extinction started by intrusive CAMP activity. *Nature Communications*, doi: 10.1038/ncomms15596

Davison I., Dailly P., 2010. Salt tectonics in the Cap Boujdour Area, Aaiun Basin, NW Africa. *Marine and Petroleum Geology*, 27, 435-441.

Delchini S., Lahfid A., Plunder A., Michard A., 2016. Applicability of the RSCM geothermometry approach in a complex tectono-metamorphic context: The Jebilet massif case study (Variscan Belt, Morocco). *Lithos*, 256–257, 1-12.

D’Lemos R.S., Inglis J.D., Samson S.D., 2006. A newly discovered orogenic event in Morocco: Neoproterozoic ages for supposed Eburnean basement of the Bou Azzer inlier, Anti-Atlas Mountains. *Precamb. Res.* 147, 65-78.

Díaz J., Gil A., Carbonell R., Gallart J., Harnafi M., 2016. Constraining the crustal root geometry beneath Northern Morocco. *Tectonophysics*, 689, 14–24.

Domènech, M., Teixell A., Babault J., Arboleya, M.L., 2015. The inverted Triassic rift of the Marrakech High Atlas: A reappraisal of basin geometries and faulting histories. *Tectonophysics*, 663, 177-191.

Domènech, M., Teixell, A., Stockli, D., 2016. Magnitude of rift-related burial and orogenic contraction in the Marrakech High Atlas revealed by zircon (U-Th)/He thermochronology and thermal modelling. *Tectonics*, doi: 10.1002/2016TC004283.

Ducrot J., Lancelot J.R., 1977. Problème de la limite Précambrien-Cambrien; étude radiochronologique par la méthode U-Pb sur zircons du volcan du Jbel Boho (Anti-Atlas marocain): *Canadian Journal of Earth Sciences*. 14, 2771-2777.

Du Dresnay R., 1979. Sédiments jurassiques du domaine des chaines atlasiques du Maroc. In : Symposium « Sédimentation jurassique de l’Ouest européen ». Publ. Spec. A.S.F., 1, 345-365.

Eby G. N. 1990. The A-type granitoids: A review of their occurrence and chemical characteristics and speculations on their petrogenesis. *Lithos*, 26, 115-134.

Eby, G.N. 1992. Chemical subdivision of A-type granitoids: petrogenetic and tectonic implications. *Geology*, 20, 641-644.

El Azzouzi M., Maury R. C., Bellon H., Youbi N., Cotten J. et Kharbouch F., 2010. Petrology and K-Ar chronology of the Neogene-Quaternary Middle Atlas basaltic province, Morocco. *Bull. Soc. géol. Fr.*, 181, 243-257

- El Bahat A., Ikenne M., Söderlund U., Cousens B., Youbi N., Ernst R., Soulaïmani A., El Janati M., Hafid A., 2012. U-Pb baddeleyite ages and geochemistry of dolerite dykes in the Bas Drâa Inlier of the Anti-Atlas of Morocco: newly identified 1380 Ma event in the West African Craton. *Lithos.* 174, 85-98.
- El Hadi H., Simancas J.F., Martínez-Poyatos D., Azor A., Tahiri A., Montero P., Fanning C.M., Bea F., González-Lodeiro F., 2010. Structural and geochronological constraints on the evolution of the Bou Azzer Neoproterozoic ophiolite (Anti-Atlas, Morocco). *Precamb. Res.* 182, 1-14.
- El Harfi A., Lang J., Salomon J., Chellai E.H., 2001. Cenozoic sedimentary dynamics of the Ouarzazate foreland basin (Central High Atlas Mountains, Morocco). *Int. J. Earth Sci.*, 90, 393–411.
- El Kochri, A., Chorowicz J., 1996. Oblique extension in the Jurassic trough of the central and eastern High Atlas (Morocco). *Can. J. Earth Sci.*, 33, 84-92.
- Elkhdar, F., 2017. Etude des déformations plio-quadernaires de l'avant-pays de la chaîne rifaine (la région d'Arbaoua). Master Université Mohammed V, Rabat, 56 p.
- El Haimier F.Z., 2014. Mouvements verticaux post-varisques des domaines mésétien et atlasique: Thermochronologie basse température sur apatite et zircon, Thèse de Doctorat, Université Hassan II Casablanca, Maroc, 124 p.
- Ennih N., Liégeois J. P., 2001. The Moroccan Anti- Atlas: the West African craton passive margin with limited Pan-African activity. Implications for the northern limit of the craton. *Precamb. Res.* 112, 291–304.
- Ennih N.; Laduron D., Greiling R.O., Errani E., de Wall H., Boutaleb M., 2001. Superposition de la tectonique éburnéenne et panafricaine dans les granitoïdes de la bordure nord du craton ouest-africain (Zenaga, Anti-Atlas, Maroc). *J. Afr. Earth Sci.* 32, 677-693.
- Ettaki, M., Ibouh, H., Chellai, E.H., Milhi, A., 2007. Les structures "diapiriques" liasiques du Haut-Atlas central, Maroc: exemple de la ride d'Ikerzi. *Afr. Geosci. Rev.*, 14, 79–93.
- Fedan B., 1988. Evolution géodynamique d'un bassin intraplaque sur décrochements : le Moyen Atlas (Maroc) durant le Méso-Cénozoïque. Thèse doctor. ès-Sci., Univ. Mohamed V, Rabat, 335 p..
- Fekkak A., Ouanaimi H., Michard A., Soulaïmani A., Ettachfani, E.M., Berrada I., El Arabi H., Lagnaoui A., Saddiqi O., 2017. Tangential thick-skinned tectonics in a Late Cretaceous-Cenozoic intracontinental belt: the Western High Atlas case study, Morocco (submitted to JAES).

- Franke W., Cocks R.M., Torsvik T.H., 2017. The Palaeozoic Variscan oceans revisited. *Gondwana Research*, doi: 10.1016/j.gr.2017.03.005
- Frasca, G., Gueydan, F., Brun, J.-P., Monié, P., 2016. Deformation mechanisms in a continental rift up to mantle exhumation. Field evidence from the western Betics, Spain. *Marine and Petroleum Geology*, 76, 310-328.
- Frizon De Lamotte D., Leturmy P., Missenard Y., Khomsi S., Ruiz G., Saddiqi O., Guillocheau F., Michard A., 2009. Mesozoic and Cenozoic vertical movements in the Atlas system (Algeria, Morocco, Tunisia): An overview. *Tectonophysics*, 475, 9-28.
- Frizon De Lamotte D., Zizi M., Missenard Y., Hafid M., El Azzouzi R.C., Maury R., Charrière A., Taki Z., Benammi M., Michard A., 2008. The Atlas system. In: Michard A. et al. (Eds.), *Continental Evolution: The Geology of Morocco*. Lecture Notes in Earth Sciences, Springer Verl., Berlin, Heidelberg, 116, 133-202.
- Frizon de Lamotte D., Crespo-Blanc A., Saint-Bezar B., Comas M., Fernandez M., Zeyen H., Ayarza H., Robert-Charrue C., Chalouan A., Zizi M., Teixell A., Arboleya M.L., Alvarez-Lobato F., Julivert M., Michard A., 2004. TRASNSMED-transect I [Betics, Alboran Sea, Rif, Moroccan Meseta, High Atlas, Jbel Saghro, Tindouf basin], in: Cavazza W., Roure F.M., Spakman W., Stampfli G.M., Ziegler P.A. (Eds.), *The TRANSMED Atlas – the Mediterranean region from crust to mantle*, Springer, Berlin ISBN 3-540-22181-6, CD Rom.
- Frizon de Lamotte D., Taverkoli-Shirazi S., Leturmy P., Averbuch O., Mouchot N., Raulin C., Leparmentier F., Blanpied C., Ringenbach J.C., 2013. Evidence for late Devonian vertical movements and extensional deformation in northern Africa and Arabia. Integration in the geodynamic of the Devonian world. *Tectonics*, 32, 1-16.
- Frizon de Lamotte, D., Saint Bézard, B., Bracène, R., Mercier, E., 2000. The two main steps of the Atlas building and geodynamics of the West Mediterranean. *Tectonics*, 19, 740-761.
- Froitzheim N., Stets J., Wurster P., 1988. Aspect of western High Atlas tectonics. In: Jacobshagen V.H. (Ed), *The Atlas system of Morocco. Studies on its geodynamic evolution*. Springer Verl., Berlin, 219-244.
- Galindo-Zaldívar J., Azzouz O., Chalouan A., Pedrera A., Ruano P., Ruiz-Constán A., Sanz de Galdeano C., Marín-Lechado C., López-Garrido A.C., Anahnah F., Benmakhlouf M., 2015. Extensional tectonics, graben development and fault terminations in the eastern Rif (Bokoya–RasAfraou area). *Tectonophysics*, 663, 140-149.
- Gärtner, A., Youbi, N., Villeneuve, M., Sagawe, A., Hofmann, M., Mahmoudi, A., Boumehdi, M.A., Linnemann, U., 2017. The zircon evidence of temporally changing sediment transport—the NW

Gondwana margin during Cambrian to Devonian time (Aoucert and Smara areas, Moroccan Sahara). *International Journal of Earth Sciences*, doi 10.1007/s00531-017-1457-x.

Gärtner A., Villeneuve M., Linnemann U., El Archi A., Bellon H., 2013. An exotic terrane of Laurussian affinity in the Mauritanides and Souttoudides (Moroccan Sahara). *Gondwana Research* 24, 687-69.

Gärtner A., Villeneuve M., Linnemann U., Gerdes A., Youbi N., Guillou O., Rjimati E. 2014. History of the West African Neoproterozoic Ocean: key to the geotectonic history of circum-Atlantic Peri-Gondwana (Adrar Souttoug Massif, Moroccan Sahara). *Gondwana Research* 29, 220-233.

Gärtner A., Villeneuve M., Linnemann U., Gerdes A., Youbi N., Hofmann M. 2015. Similar crustal evolution in the western units of the Adrar Souttoug Massif (Moroccan Sahara) and the Avalonian terranes: Insights from Hf isotope data. *Tectonophysics* 681, 305-317.

Gartner A., Villeneuve M., Linnemann U., Gerdes A., Youbi N., Guillou O., Rjimati E. 2016. History of the west African Neoproterozoic ocean: key to the geotectonic history of circum-Atlantic peri-Gondwana (Adrar Souttoug massif, Moroccan Sahara). *Gondwana Res.* 29, 220-233.

Gasquet D., Chèvremont P., Baudin T., Chalot-Prat F., Guerrot C., Cocherie A., Roger J., Hassenforder B., Cheilletz A., 2004. Polycyclic magmatism in the Tagragra and Kerdous-Tafeltast inliers (Western Anti-Atlas, Morocco). *J. Afr. Earth Sci.* 39, 267-275.

Gasquet D., Ennih N., Liégeois J.P., Soulaimani A., Michard A., 2008. The Pan-African Belt. In: Michard, A., Saddiqi, O., Chalouan, A., Frizon de Lamotte, D. (Eds.), *Continental Evolution: The Geology of Morocco*. *Lect. Notes Earth Sci.*, 116, 33-64.

Ghorbal B., 2009. Mesozoic to Quaternary Thermo-tectonic evolution of Morocco (NW Africa). PhD thesis Vrije Universiteit, Amsterdam, 226 p.

Ghorbal B., Bertotti G., Foeken J., Andriessen P., 2008. Unexpected Jurassic to Neogene vertical movements in “stable” parts of NW Africa revealed by low temperature geochronology. *Terra Nova*, 20, 355–363.

Gil A., Gallart J., Diaz J., Carbonell R., Torne M., Levander A., Harnafi M., 2014. Crustal structure beneath the Rif Cordillera, North Morocco, from the RIFSIS wide-angle reflection seismic experiment. *Geochem. Geophys. Geosyst.*, 15, 4712–4733.

Gouiza M., 2011. Mesozoic source-to-sink systems in NW Africa: Geology of vertical movements during the birth and growth of the Moroccan rifted margin. PhD thesis, Vrije Universiteit, Amsterdam.

Gouiza M., Charton R., Bertotti G., Andriessen P., Storms J. E., 2016. Post-Variscan evolution of the Anti-Atlas belt of Morocco constrained from low-temperature geochronology. *International Journal of Earth Sciences*, doi:10.1007/s00531-016-1325-0.

Green T. H. 1992. Experimental phase-equilibrium studies of garnet-bearing I-type volcanics and high-level intrusives from Northland, New-Zealand. *Transactions of the Royal Society of Edinburgh-Earth Sciences*, 83, 429-438.

Hafid M., Tari G., Bouhadioui D., El Moussaid I., Echarfaoui H., Ait Salem A., Nahim M., Dakki M., 2008. Atlantic Basins. In: Michard A. et al., (Eds), *Continental evolution: the Geology of Morocco*. Springer Verl., Berlin, Heidelberg, *Lecture Notes Earth Sci.*, 116. 303-329.

Hafid, M., 2006. Styles structuraux du Haut Atlas de Cap Tafelney et de la partie septentrionale du Haut Atlas occidental: tectonique salifère et relation entre l'Atlas et l'Atlantique. *Notes Mém. Serv. géol. Maroc*, 465, 172 p.

Haddoumi, H., Charrière, A., Mojon, P.O., 2010. Stratigraphie et sédimentologie des «Couches rouges» continentales du Jurassique-Crétacé du Haut Atlas central (Maroc) : implications paléogéographiques et géodynamiques. *Geobios*, 43, 433-451

Haddoumi, H., Alméras, Y., Bodergat, A.M., Charrière, A., Mangold, Ch., Benschili, K., 1998. Âges et environnements des Couches rouges d'Anoual (Jurassique moyen et Crétacé inférieur, Haut-Atlas oriental, Maroc). *Comptes Rendus des Séances de l'Académie des Sciences de Paris*, 2, IIA, 327, 127-133.

Hefferan K., Soulaïmani A., Samson S. D., Admou H., Inglis J., Saquaque A., Heywood N., 2014. A reconsideration of Pan-African orogenic cycle in the Anti-Atlas Mountains, Morocco. *J. Afr. Earth Sci.* 98, 34-46.

Heron K., Jessel M., Benn K., Harris E., Crowley Q.G., 2016. The Tasiast deposit, Mauritania Ore *Geol. Rev.*, 78, 564-572.

Ibouh H., 1995. Tectonique en décrochement et intrusions magmatiques au Jurassique ; tectogenèse polyphasée des rides jurassiques d'Imilchil (Haut Atlas central, Maroc). Thèse de 3ème cycle, Univ. Cadi Ayyad, Marrakech, 225 p. (déposée à la bibliothèque de la SGF).

Ibouh H., 2004. Du rift avorté au bassin sur décrochement, contrôles tectonique et sédimentaire pendant le Jurassique (Haut Atlas central, Maroc). Thèse d'état Es-Sciences, Univ. Cadi Ayyad, Marrakech, 224 p. (déposée à la Bibliothèque de la SGF).

Ibouh H., Charrière A., Michard A., 2011. Middle Jurassic unsteady sedimentation in the High Atlas Basin (Imilchil area, Morocco): evidence for halokinetic movements.

http://www.searchanddiscovery.com/pdfz/abstracts/pdf/2011/european_region/abstracts/ndx_Ibouh.pdf.html

Ibouh H., Saidi A., Bouabdelli M., Youbi N., Boummane Kh., et Aït Chayeb E. H., 2002. Les roches volcaniques triasico-liasiques du Maroc ; Exemple de la ride de Tasraft (Haut Atlas Central) données pétrologiques, géochimiques et implications géodynamiques. *Africa Geosci. Rev.*, 9, 75-92.

Ikenne M., Souhassou M., Arai S., Soulaimani A., 2017. Overview of magmatic events in northwest edge of the West African Craton: example of Morocco. *J. Afr. Earth Sci.* 127, 3-15.

Inglis J.D., Hefferan K., Samson S. D., Admou H., Saquaque, A., 2016. Determining age of Pan African metamorphism using Sm-Nd garnet whole rock geochronology and phase equilibria modeling in the Tasriwine ophiolite, Sirwa, Anti-Atlas Morocco. *J. Afr. Earth Sci.* 127, 88-98.

Inglis J.D., D'Lemos R.S., Samson S.D., Admou H., 2005. Geochronological constraints on late Precambrian intrusion, metamorphism, and tectonism in the Anti-Atlas Mountains. *J. Geol.* 113 (4), 439-450.

Jenny, J., Le Marrec, A., Monbaron, M., 1981. Les Couches rouges du Jurassique moyen du Haut Atlas central (Maroc) : corrélations lithostratigraphiques, éléments de datations et cadre tectono-sédimentaire. *Bulletin de la Société géologique de France*, 7, 23 (6), 627-639.

Key R.M., Loughlin S.C., Gillespie M., Del Rio M., Horstwood M.S.A., Crowley Q.G., Darbshire D.B.F., Pitfield P.E.J., Henney P.J. 2008. Two Mesoarchean terranes in the Reguibat Shield of NW Mauritania. In: Ennih N., Liégeois J.P. (Eds), *The boundaries of the West African Craton*. Geol. Soc. London Spec. Pub. 297, 33-52.

Kouyaté D, Söderlund U., Youbi N., Ernst R., Hafid A., Ikenne M., Soulaimani A., Bertrand H., El Janati M., Chaham K.R., 2012. U-Pb baddeleyite ages of 2040 Ma, 1650 Ma and 885 Ma on dolerites in the West African Craton (Anti-Atlas inliers): possible links to break-ups of Precambrian supercontinents. *Lithos.* 174, 71-84.

Kroner U., Roscher M., Romer R.L., 2016. Ancient plate kinematics derived from the deformation pattern of continental crust: Paleo- and Neo-Tethys opening coeval with prolonged Gondwana–Laurussia convergence. *Tectonophysics*, doi.org/10.1016/j.tecto.2016.03.034

Laville E., 1985. Evolution sédimentaire, tectonique et magmatique du bassin jurassique du Haut Atlas Central (Maroc) ; modèle en relais multiples de décrochements. Thèse Doct. ès-sci., Univ. Languedoc Montpellier II, 166 p.

Laville E., Fedan B., Piqué A., 1991. Déformation synschisteuse jurassique, Orogenèse cénozoïque: deux étapes de la structuration du Haut Atlas (Maroc). *C. R. Acad. Paris*, 312, sér. II, 1205-1211.

Leblanc M., 1975. The Proterozoic oceanic crust at Bou-Azzer. *Nature*, 261:34-35.

Lécorché J.P., Bronner G., Dallmeyer R.D., Rocci G., Roussel J. 1991. The Mauritanide Orogen and its northern extensions (Western Sahara and Zemmour), West Africa. In: Dallmeyer, R.D., Lécorché, J.P. (Eds.), *The West African Orogen and Circum- Atlantic correlatives*. Springer Verl, pp. 187–227.

Liégeois J.P., Fekkak A., Bruguier O., Errami E., Ennih N., 2006. The Lower Ediacaran (630-610 Ma) Saghro Group: an orogenic transpressive basin development during the early metacratonic evolution of the Anti-Atlas (Morocco). *IGCP485 4th meeting Algiers, Abstracts vol.*, 57.

Linnemann U., Gerdes A., Hofmann M., Marko L., 2014. The Cadomian Orogen: Neoproterozoic to Early Cambrian crustal growth and orogenic zoning along the periphery of the West African Craton. Constraints from U–Pb zircon ages and Hf isotopes (Schwarzburg Antiform, Germany). *Precamb. Res.* 244, 236–278.

Leprêtre R., Barbarand J., Missenard Y., Leparmentier F., Frizon de Lamotte D., 2013. Vertical movements along the northern border of the West African Craton: The Reguibat Shield and adjacent basins. *Geol. Mag.*, doi:10.1017/S0016756813000939.

Leprêtre R., Missenard Y., Barbarand J., Gautheron C., Saddiqi O., Pinna-Jamme R., 2015. Postrift history of the eastern central Atlantic passive margin: Insights from the Saharan region of South Morocco. *J. Geophys. Res., Solid Earth*, 120, doi:10.1002/2014JB011549.

Leprêtre R., Missenard Y., Saint-Bezar B., Barbarand J., Delpech G., Yans J., Dekoninck A., Saddiqi O., 2015. The three main steps of the Marrakech High Atlas building in Morocco: Structural evidences from the southern foreland, Imini area. *J. Afr. Earth Sci.*, 109, 177-194.

Lhachmi, A., Lorand, J.P., Fabriès, J., 2001. Pétrologie de l'intrusion alcaline mésozoïque de la région d'Anemzi, Haut Atlas central, Maroc. *J. Afr. Earth Sci.*, 32, 741–764.

Linnemann U., Pereira F., Jeffries T.E., Drost K., Gerdes A., 2008. The Cadomian Orogeny and the opening of the Rheic Ocean: the diachrony of geotectonic processes constrained by LA-ICP-MS U-Pb zircon dating (Ossa Morena and Saxo-Thuringian Zones, Iberian and Bohemian Massifs). *Tectonophysics*, 461, 21-43.

Linnemann U., Gerdes A., Hofmann M., Marko L., 2014. The Cadomian Orogen: Neoproterozoic to Early Cambrian crustal growth and orogenic zoning along the periphery of the West African Craton. Constraints from U-Pb zircon ages and Hf isotopes (Schwartzburg Antiform, Germany). *Precambrian Research*, 244, 236-278.

Mancilla F.L., Stich D., Morales J., Julià J., Diaz J., Pazos A., Córdoba D., Pulgar J.A., Ibarra P., Harnafi M., Gonzalez-Lodeiro F., 2012. Crustal thickness variations in Northern Morocco. *J. Geophys. Res.*, 177, B02312, doi:10.1029/2011JB008608

Mancilla F.L., Diaz J., 2015. High resolution Moho topography map beneath Iberia and Northern Morocco from receiver function analysis. *Tectonophysics*, 663, 203–211.

Marçais, J., 1936. La constitution géologique de la région au nord de Taza et de Guercif (Maroc Oriental). *C.R. Acad. Sci. Paris*, 202, 1165-1167.

Martín-Martín J. D., Vergés J., Saura E., Moragas M., Messenger G., Baqués V., Razin R., Grélaud C., Malaval M., Joussiaume R., Casciello E., Cruz-Orosa I., Hunt D.W., 2016. Diapiric growth within an Early Jurassic rift basin: The Tazoult salt wall (central High Atlas, Morocco). *Tectonics*, 36, 2–32.

Marzoli A., Renne P. R., Piccirillo E. M., Ernesto M., Bellieni G., De Min A., 1999. Extensive 200-million year-old continental flood basalts of the Central Atlantic Magmatic Province. *Science*, 284, 616-618

Matton G., Jébrak M. 2009. The Cretaceous Peri-Atlantic Alkaline Pulse (PAAP): Deep mantle plume origin or shallow lithospheric break-up. *Tectonophysics*, 469(1-4), 1-12.

Mazzoli S., Martín-Algarra A., 2014. Comment on: Localization of deformation and kinematic shift during the hot emplacement of the Ronda peridotites (Betic Cordilleras, southern Spain) by J.M. Tubía, J. Cuevas, and J.J. Esteban, *Journal of Structural Geology*, 50 (2013), 148–160. *Journal of Structural Geology*, 60, 97-101.

Medioni R., 2011. L'oeuvre des géologues français au Maroc. *Travaux du Comité français d'Histoire de la Géologie, Comité français d'Histoire de la Géologie*, 3ème série, tome 25, 1, 1-52.

Meghraoui M., Pondrelli S., 2012. Active faulting and transpression tectonics along the plate boundary in North Africa. *Annals Geophys.*, 55, 955-967.

Michard A., Feinberg H., Elazzab D., Bouybaouene M.L., Saddiqi O., 1992. A serpentinite ridge in a collisional paleomargin setting: the Beni Malek massif, External Rif, Morocco. *Earth Planet. Sci. Lett.*, 113, 435-442.

Michard A., Frizon de Lamotte D., Negro F., Saddiqi O., 2007. Serpentinite slivers and metamorphism in the External Maghrebides: arguments for an intracontinental suture in the African paleomargin (Morocco, Algeria). *Rev. Soc. Geol. Espana*, 20, 173-185.

Michard A., Saddiqi O., Chalouan A., Frizon de Lamotte D., (Eds.), 2008. *Continental Evolution: The Geology of Morocco. Structure, Stratigraphy, and Tectonics of the Africa-Atlantic-Mediterranean Triple Junction*. Lecture Notes in Earth Sciences, Springer Verlag, Berlin Heidelberg, 116, 426 p.

Michard A., Ibouh H., Charrière A., 2011. Syncline-topped anticlinal ridges from the High Atlas: A Moroccan conundrum, and inspiring structures from the Syrian Arc, Israel. *Terra Nova*, 23, 314-323.

Michard A., Hoepffner C., Soulaïmani A., Baidder L. 2008. The Variscan belt. In: Michard, A., Saddiqi, O., Chalouan, A., Frizon de Lamotte, D. (Eds.), *Continental Evolution: the Geology of Morocco*. Lecture Notes in Earth Sciences, vol. 116, pp. 65-131.

Michard A., Mokhtari A., Chalouan A., Saddiqi O., Rossi P., Rjimati E.C., 2014. New ophiolite slivers in the External Rif belt, and tentative restoration of a dual Tethyan suture in the western Maghrebides. *Bull Soc Geol Fr.*, 185, 313–328.

Michard A., Saddiqi O., Chalouan A., Rjimati E.C., Mouttaqi A., 2011. *Nouveaux guides géologiques et miniers du Maroc*. Notes Mém. Serv. Géol. Maroc, volumes n° 556 à 564.

Michard, A., Soulaïmani A., Hoepffner C., Ouanaimi H., Baidder L., Rjimati E.C., and Saddiqi O., 2010. The South-Western branch of the Variscan Belt: Evidence from Morocco. *Tectonophysics*, 492, 1-24.

Michard A., Soulaïmani A., Ouanaimi H., Raddi Y., Aït Brahim L., Rjimati E.C., Baidder L., Saddiqi O., 2017. Saghro Group in Ougnat Massif (Morocco), an evidence for a continuous Cadomian basin along the northern West African Craton. *C.R. Geoscience*, 349, 81-90.

- Missenard Y., Michard A., Durand-Delga M., 2008. Major steps in the geological discovery of Morocco. In Michard et al. (Eds), *Continental Evolution: the Geology of Morocco*. Lecture Notes in Earth Sciences 116, 377-394.
- Missenard Y., Zeyen H., Frizon de Lamotte D., Leturmy P., Petit C., Sébrier M., Saddiqi O., 2006. Crustal versus asthenospheric origin of the relief of the Atlas Mountains of Morocco. *J. Geophys. Res.* 111, B03401, doi:10.1029/2005JB003708.
- Missenard Y., Saddiqi O., Barbarand J., Leturmy P., Ruiz G., El Haimer F.Z., Frizon de Lamotte D., 2008. Cenozoic denudation in the Marrakech High Atlas, Morocco: insight from apatite fission track thermochronology. *Terra Nova*, 20, 221–228.
- Missenard Y., Cadoux A., 2012. Can Moroccan Atlas lithospheric thinning and volcanism be induced by edge-driven convection? *Terra Nova*, 24, 27–33.
- Monbaron M., 1982. Précisions sur la chronologie de la tectogenèse atlasique, exemple du domaine atlasique mésogéen du Maroc. *Comptes Rendus des Séances de l'Académie des Sciences de Paris, II*, 294, 883-886.
- Montero P., Haissen F., Mouttaqi A., Molina J.F., Errami A., Sadki O., Cambeses A., Bea F., 2016. Contrasting SHRIMP U–Pb zircon ages of two carbonatite complexes from the peri-cratonic terranes of the Reguibat Shield: Implications for the lateral extension of the West African Craton. *Gondwana Research*, 38, 238-250.
- Montero, P., Haissen F., El Archi A., Rjimati E.C., Bea F., 2014. Timing of Archean crust formation and cratonization in the Awsard-Tichla zone of the NW Reguibat Rise, West African Craton: A SHRIMP, Nd–Sr isotopes, and geochemical reconnaissance study. *Precambrian Res.*, 242, 112-137.
- Moragas M., Verges J., Saura E., Martín-Martín J.D., Messenger G., Merino-Tome O., Suarez-Ruiz I., Razin P., Grelaud C., Malaval M., Joussiaume R., Hunt D.W., 2016. Jurassic rifting to post-rift subsidence analysis in the Central High Atlas and its relation to salt diapirism. *Basin Res.*, doi: 10.1111/bre.12223.
- Moret, M. L., 1931. Recherches géologiques dans l'Atlas de Marrakech, Maroc. *Notes Mém. Serv. Géol. Maroc*, 18, 262 p.

- Nance R.D., Gutierrez-Alonso G., Keppie J.D., Linnemann U., Murphy J.B., Quesada C., Strackan R.A., Woodcock N.H., 2012. A brief history of the Rheic Ocean. *Geoscience Frontiers*, 3(2), 125-135.
- Neltner L., 1938. Etudes géologiques dans le Sud marocain (Haut Atlas et Anti-Atlas). *Notes Mém. Serv. Min. Cart. Géol. Maroc*. 42, 298 p.
- Nocquet J.M., 2012. Present-day kinematics of the Mediterranean: a comprehensive overview of GPS results. *Tectonophysics*, 579, 220-242.
- Nocquet J.M., Calais E., 2004. Geodetic measurements of crustal deformation in the western Mediterranean and Europe, *Pure Applied Geophys.*, 161, 661-681.
- Qarbous A., Medina F., Hoepffner C., 2008. Tectonique cassante et état de contrainte dans le bassin de Tizi n'Test (Haut Atlas, Maroc) au cours de l'inversion tertiaire. *Estudios Geol.*, 64, 17-30.
- Ouabid M., Ouali H., Garrido C.J., Acosta-Vigil A., Román-Alpiste M.J., Dautria J-M., Marchesi C., Hidas K., 2017. Neoproterozoic granitoids in the basement of the Moroccan Central Meseta: correlation with the Anti-Atlas at the NW paleo-margin of Gondwana. *Precambrian Research*, doi: <http://dx.doi.org/10.1016/j.precamres.2017.07.007>
- Ouanaimi H., Soulaïmani A., Hoepffner C., Michard A., Baidder L., 2016. The Atlas-Meseta Red Beds basin (Morocco) and the Lower Ordovician rifting of NW Gondwana. *Bull.Soc.géol.France*, 187, 3, 155-168.
- Oukassou M., Saddiqi O., Barbarand J., Sebti S., Baidder L., Michard A., 2013. Post-Variscan exhumation of the Central Anti-Atlas (Morocco) constrained by zircon and apatite fission-track thermochronology. *Terra Nova*, 25(2), 151-159.
- Palomeras I., Thurner S., Levander A., Liu K., Villaseñor A., Carbonell R., Harnafi M., 2014. Finite-frequency Rayleigh wave tomography of the western Mediterranean: mapping its lithospheric structure, *Geochem. Geophys. Geosyst.*, 15, 140–160.
- Pereira M.F., El Houicha M., Chichorro M., Armstrong R., Jouhari A., El Attari A., Ennih N., Silva J.B. 2015., Evidence of a Paleoproterozoic basement in the Moroccan Variscan Belt (Rehama Massif, Western Meseta). *Precambrian Research*, 268, 61-73.
- Perez Caceres I., Martinez-Poyatos D., Simancas J.F., Azor A., 2017. Testing the Avalonian affinity of the South Portuguese Zone and the Neoproterozoic evolution of SW Iberia through detrital zircon populations. *Gondwana Research*, 42, 177-192.

Piqué, A., Aït Brahim, L., Aït Ouali, R., Amrhar, M., Charroud, M., Gourmelen, C., Laville, E., Rekhiss, F., Tricart, P., 1998. Evolution structurale des domaines atlasiques du Maghreb au Méso-Cénozoïque ; le rôle des structures héritées dans la déformation du domaine atlasique de l'Afrique du Nord. *Bulletin de la Société géologique de France*, 169 (6), 797-810.

Riveline J., Berger J.P., Feist M., Martin-Closas C., Schudack M.; Soulié-Märsche I., 1996. European Mesozoic-Cenozoic charophyte biozonation. *Bulletin de la Société géologique de France*, 167 (3), 453-468.

Rjimati E.C., Michard A., Saddiqi O., 2011. Anti-Atlas occidental et Provinces sahariennes. In: Michard, et al. (Eds.) : *Nouveaux Guides géologiques et miniers du Maroc*, vol.6. Notes et Mémoires du Service géologique du Maroc, 561, 9-95.

Rjimati E.C., Zemmouri A., Benlakhdim A., Mustaphi H., Haimouk M., Hamidi F., Amzarhrou M., Esselmani B., 2002. Carte Géologique du Maroc, 1:50000, feuille Awsard. Notes et Mémoires du Service Géologique du Maroc, n° 439.

Ruiz G. M. H., Sebti S., Negro F., Saddiqi O., Frizon De Lamotte D., Stockli D., Foeken J., Stuart F., Barbarand J., Schaer J. P., 2011. From central Atlantic continental rift to Neogene uplift - western Anti-Atlas (Morocco). *Terra Nova*, 23, 35–41.

Saddiqi O., El Haimer F. Z., Michard A., Barbarand J., Ruiz G. M. H., Mansour E. M., Leturmy P., Frizon de Lamotte D., 2009. Apatite fission-track analyses on basement granites from south-western Meseta, Morocco: Paleogeographic implications and interpretation of AFT age discrepancies. *Tectonophysics*, 475, 29–37.

Samson S.D., Inglis J.D., D'Lemos R.S., Admou H., Blichert-Toft J., Hefferan K., 2004. Geochronological, geochemical, and Nd-Hf isotopic constraints on the origin of Neoproterozoic plagiogranites in the Tasriwine ophiolite, Anti-Atlas orogen, Morocco. *Precamb. Res.* 135, 133-147.

Saquaque A., Admou H., Cisse A., Benyoussef A., Reuber I., 1989. Les intrusions calco-alcalines de la boutonnière de Bou-Azzer-El Graara (Anti-Atlas): marqueurs de la déformation panafricaine majeure dans un contexte de collision d'arc. *C. R. Acad. Sci. Paris.* 308, 1279-1283.

Saura, E., Verges, J., Martin-Martin, J.D., Messenger, G., Moragas, M., Razin, P., Grelaud, C., Jousseaume, R., Malaval, M., Homke, S., Hunt, D.W., 2014. Syn- to post-rift diapirism and minibasins of the Central High Atlas (Morocco): the changing face of a mountain belt. *J. Geol. Soc.* 171, 97–105.

Schwartz G., Wigger P. J., 1988. Geophysical studies at the crust and upper mantle in the Atlas system of Morocco. In: Jacobshagen V.H. (ed.), The Atlas system of Morocco. Lect. Notes Earth Sci. 15, 340-357.

Sougy J. 1969. Grandes lignes structurales de la chaîne des Mauritanides et de son avant-pays (socle précambrien et sa couverture infracambrienne et paléozoïque), Afrique de l'Ouest. Bull. Soc. Geol. Fr. 11, 133-149.

Sebti S., Saddiqi O., El Haimer F.Z., Michard A., Ruiz G., Bousquet R., Baidder L., Frizon de Lamotte D., 2009. Vertical movements at the fringe of the West African Craton: First zircon fission track datings from the Anti-Atlas Precambrian basement, Morocco. Comptes Rendus Geoscience, 341, 71-77.

Sehrt M., Glasmacher U.A., Stockli D.F., Haddou J., Kluth O., 2017. The southern Moroccan passive continental margin: An example of differentiated long-term landscape evolution in Gondwana. Gondwana Research, doi: 10.1016/j.gr.2017.03.013

Simancas J.F., Azor A., Martinez-Poyatos D., Tahiri A., El Hadi H., Gonzalez-Lodeiro F. Perez-Estaun A., Carbonell R., 2009. Tectonic relationships of Southwest Iberia with the allochthons of Northwest Iberia and the Moroccan Variscides. C.R. Geoscience, 341, 103-113.

Souhel A. 1996. Le Mésozoïque dans le Haut Atlas de Béni Mellal Strata, 2, 27, 235 p.

Soulaimani A., Michard A., Ouanaimi H., Baidder L., Raddi Y., Saddiqi O., Rjimati E.C., 2014. Late Ediacaran-Cambrian structures and their reactivation during the Variscan and Alpine cycles in the Anti-Atlas (Morocco). J. Afr. Earth Sci., 98, 94-112.

Soulaimani A., Ouanaimi H., Baidder L., Eddebi A., 2016. La structuration hercynienne du socle paléozoïque de la boutonnière de Mougueur (Haut Atlas oriental, Maroc). Journées géologiques du Maroc, Ministère Energie & Mines Rabat, Résumés, 29-30.

Soulaimani A., Jaffal M., Maacha L., Kchikach A., Najine A., Saidi A., 2006. Modélisation magnétique de la suture ophiolitique de Bou Azzer-El Graara (Anti-Atlas central, Maroc). Implications sur la reconstitution géodynamique panafricaine. C. R. Geosciences, 338, 153-160.

Soulaimani A., Egal E., Razin Ph., Youbi N., Admou H., Blein O., Barbanson L., Gasquet D., Bouabdelli M., Anzar-Conseil, 2013. Notice explicative carte géol. Maroc (1/50 000), feuille Al Glo'a, Notes Mém. Serv. Géol. Maroc, 532bis, 1-140.

- Spakman W., Wortel M.J.R., 2004. A tomographic view on western Mediterranean geodynamics. In: Ziegler, P. (Ed.), *The TRANSMED Atlas — The Mediterranean Region : From Crust to Mantle*. Springer Verl., 31–52.
- Stets J., Wurster P., 1982. Atlas and Atlantic structural relations. In: Von Rad U., Hinz K, Sarntheim M., Seibold E. (Eds) “Geology of the Northwest of African continental margin” Springer Verl., Berlin, 34-60.
- Suter G., 1980. Carte géologique de la chaîne rifaine, échelle 1:500000. Serv. Carte géol. Maroc, 245a.
- Tari, G., Molnar, J., Ashton, P., 2003. Examples of salt tectonics from West Africa: a comparative approach. *Geol. Soc. London Spec. Publ.* 207, 85–104.
- Teixell, A., Arboleya, M.L., Julivert, M., Charroud, M., 2003. Tectonic shortening and topography in the central High Atlas (Morocco). *Tectonics*, 22, 1051-1064. [doi/10.1029/2002tc001460](https://doi.org/10.1029/2002tc001460)
- Turner S., Palomeras I., Levander A., Carbonell R., Cinty L. 2014. Evidence for ongoing lithospheric removal in the Western Mediterranean: Ps receiver function results from the PICASSO Project. *Geochem. Geophys. Geosyst.*, 15, 1113–1127.
- Tahiri A., Montero P., El Hadi H., Martínez Poyatos D., Azor A., Bea F., Simancas F., González Lodeiro F., 2010. Geochronological data on the Rabat–Tiflet granitoids : their bearing on the tectonics of the Moroccan Variscides. *J. Afr. Earth Sci.*, 57, 1-13.
- Thomas R.J., Chevallier L.P., Gresse P.G., Harmer R.E., Eglinton B.M., Armstrong R.A., de Beer, C.H., Martini J.E.J., de Kock G.S., Macey P.H., Ingram B.A., 2002. Precambrian evolution of the Sirwa Window, Anti-Atlas orogen, Morocco. *Precamb. Res.*, 118, 1–57.
- Triantafyllou A., Berger J., Baele J.-M., Diot H., Ennih N., Plissart G., Monnier C., Watlet A., Bruguier O., Spagna P., Vandycke S., 2015. The Tachakoucht-Iriri-Tourtit arc complex (Moroccan Anti-Atlas): Neoproterozoic records of polyphased subduction-accretion dynamics during the Pan-African orogeny. *J. Geodyn.*, 105, 27-50.
- Van Hinsbergen D.J.J., Vissers R.L.M., Spakman W., 2014. Origin and consequences of western Mediterranean subduction, rollback, and slab segmentation. *Tectonics*, 33, 393–419.
- Van der Woerd J., Dorbath C., Ousadou F., Dorbath L., Delouis B., Jacques E., Tapponnier P., Hahou Y., Menzhi M., Frogneux M., Haessler H., 2014. The Al Hoceima Mw 6.4 earthquake of 24 February 2004 and its aftershocks sequence. *J. Geodyn.*, 77, 89-109.

- Villeneuve M., Bellon H., El Archi A., Sahabi M., Rehault J., Olivet J. 2006. Evènements panafricains dans l'Adrar Souttouf (Sahara marocain). *Comptes Rendus Geosci.* 338, 359-367.
- Villeneuve M., Gärtner A., Youbi N., Archi A., Vernhet E., Rjimati E., Linnemann U., Bellon H., Gerdes A., Guillou O., Corsini M., Paquette J.-L., 2015. The southern and central parts of the "Souttoufide" belt, Northwest Africa. *J. Afr. Earth Sci.* 112, 451-470.
- Von Raumer J.F., Stampfli G.M., 2008. The birth of the Rheic Ocean: early Palaeozoic subsidence patterns and subsequent tectonic plate scenarios. *Tectonophysics*, 46, 9-20.
- Walsh G.J., Aleinikoff J.N., Benziane F., Yazidi A., Armstrong T.R., 2002. U-Pb zircon geochronology of the Paleoproterozoic Tagragra de Tata inlier and its Neoproterozoic cover, western Anti-Atlas, Morocco. *Precamb. Res.* 117, 1-20.
- Walsh G.J., Benziane F., Aleinikoff J.N., Harrison R.W., Yazidi A., Burton W.C., Quick J.E., Saadane A., 2012. Neoproterozoic tectonic evolution of the Jebel Saghro and Bou Azzer-El Graara inliers, eastern and central Anti-Atlas, Morocco. *Precamb. Res.*, 216, 23-62.
- Warne J. E., 1988. Jurassic carbonate facies of the central and Eastern High Atlas rift, Morocco. In : Jacobshagen V. H. (ed): *The Atlas System of Morocco, Studies on its Geodynamic Evolution.* Lect. Notes Earth Sci., 15, 169-199.
- Wernert P., Schulmann K., Chopin F., Štípská P., Bosch D., El Houicha M., 2016. Tectonometamorphic evolution of an intracontinental orogeny inferred from P-T-t-d paths of the metapelites from the Rehamna massif (Morocco). *Journal of Metamorphic Geology*, 34, 917-940.
- Wernike B., 1985. Uniform-sense normal simple shear of the continental lithosphere. *Can. J. Earth Sci.*, 22, 108-125.
- Youbi N., Kouyaté D., Söderlund U., Ernst R.E., Soulimani A., Hafid A., Ikenne M., El Bahat A., Bertrand H., Rkha Chaham K., Ben Abbou M., Mortaji A., El Ghorfi M., Zouhair M., El Janati M., 2013. The 1750 Ma magmatic event of the West African Craton (Anti-Atlas, Morocco). *Precamb. Res.*, 236, 106-123.
- Youbi N., Martins L., Munhá J. M., Ibouh H., Madeira J., Aït Chayeb E. H., & El Boukhari A., 2003. The Late Triassic-Early Jurassic Volcanism of Morocco and Portugal in the framework of the Central Atlantic Magmatic Province. In: Hame W.E. McHone J.M., Renne P.R., Ruppel C. (Eds.), *The Central Atlantic Magmatic Province: Insights from Fragments of Pangea.* Geophys. Monographs Ser. 136, Am. Geophys. Union, 179-207.

Zaghloul M.N., 2002 : La sédimentation silicoclastique Oligo - Miocène type " Flysch "dans le Rif, "Bassin des Flyschs " et" Zones internes " (Rif, Maroc) : Evolution et corrélations à l'échelle de la chaîne Maghrébide. Thèse d'Etat, Univ. AbdelMalek Essaadi-Tétouan. 316p.

Zayane R, Essaifi A., Maury R., Piqué A., Laville E., et Bouabdelli M., 2002. Cristallisation fractionnée et contamination crustale dans la série magmatique jurassique transitionnelle du Haut Atlas central (Maroc). C. R. Geoscience, 334, 97-104.