

List of articles published in scientific and environmental journals

- 1/ Lagneau V., Regnault O., Descostes M. (2019). Industrial Deployment of Reactive Transport Simulation: an Application to Uranium in situ Recovery. *Reviews in Mineralogy and Geochemistry* **85**, 499-528.
- 2/ Leermakers M., Mbachou B.E., Husson A., Lagneau V., Descostes M. (2019). An alternative sequential extraction scheme for the determination of trace elements in ferrihydrite rich sediments. *Talanta* **199**, 80-88.
- 3/ Lestini L., Beaucaire C., Vercouter T., Ballini M., Descostes M. (2019). Role of trace elements in the 226-Radium incorporation in sulfate minerals (gypsum and celestite). *ACS Earth Space Chemistry* **3(2)**, 295-304.
- 4/ Husson A., Leermakers M., Descostes M., Lagneau V. (2019). Environmental geochemistry and bioaccumulation/bioavailability of uranium in post-mining context – Bois-Noirs Limouzat mine. *Chemosphere* **236**, Article 124341.
- 5/ Tayal A., Conradson S.D., Kanzari A., Lahrouch F., Descostes M., Gerard M. (2019). Determination of the speciation of U in granitic waste rock piles from Limousin France, by X-ray Absorption Fine Structure spectroscopy. *RSC Advances* **9**, 11762-11773.
- 6/ Angileri A., Sardini P., Donnard J., Duval S., Lefeuvre H., Oger T., Patrier P., Rividi N., Siitari-Kauppi M., Toubon H., Descostes M. (2018). Determining 238U decay chain disequilibrium spatially in geo-materials – a solution by combined mapping approaches. *Applied Radiation and Isotopes* **140**, 228-237.
- 7/ Bordelet G., Beaucaire C., Descostes M., Phrommavanh V. (2018). Chemical reactivity of natural peat towards U and Ra. *Chemosphere* **202**, 651-660.
- 8/ Coral T., Descostes M., De Boissezon H., Bernier-Latmani R., De Alencastro F., Rossi P. (2018). Microbial communities associated with uranium in-situ recovery mining process are related to acid mine drainage assemblages. *Science of the Total Environment* **628-629**, 26-35.
- 9/ Chautard C., Beaucaire C., Gérard M., Phrommavanh V., Nos J., Galois L., Calas G., Roy R., Descostes M. (2017). Geochemical characterization of U tailings (Bois Noirs Limouzat, France). *Procedia Earth and Planetary Science* **17**, 308-311.
- 10/ Huynh J., Palacio Olarte R., Safizadeh F., Lefèvre G., Descostes M., Guignard N., Rousseau J., Royer S., Tertre E., Batonneau-Gener I. (2017). Uranium in water adsorption over NH₂ functionalized ordered silica. *ACS Applied Materials and Interfaces* **9**, 15672-15684.
- 11/ Kanzari A., Gérard M., Boekhout F., Poquet T., Galois L., Calas G., Descostes M. (2017). Impact of weathering on uranium migration on granitic waste rock piles from the former La Crouzille uranium mines (Limousin, France). *Journal of Geochemical Exploration* **183**, 114-126.
- 12/ Robin V., Tertre E., Beaucaire C., Descostes M., Regnault O. (2017). Experimental data and assessment of predictive modeling for radium ion exchange on swelling clay minerals with a tetrahedral charge. *Applied Geochemistry* **85**, 1-9.
- 13/ Sánchez-Castro I., Amador-García A., Moreno-Romero C., López-Fernández M., Phrommavanh V., Nos J., Descostes M., Merroun M.L. (2017). Screening of bacterial strains isolated from uranium mill tailings porewaters for bioremediation purposes. *Journal of Environmental Radioactivity* **166**, 130-141.
- 14/ Younes K., Grasset L. (2017). Analysis of molecular proxies of a peat core by thermally assisted hydrolysis and methylation-gas chromatography combined with multivariate analysis. *Journal of Analytical and Applied Pyrolysis* **124**, 726-732.
- 15/ Younes K., Laduranty J., Descostes M., Grasset L. (2017). Molecular biomarkers study of an ombrotrophic peatland impacted by an anthropogenic clay deposit. *Organic Geochemistry* **105**, 20-32.
- 16/ Clavier N., Crétaz F., Imbert P.H., Szenknect S., Mesbah A., Poinsot C., Descostes M., Dacheux N. (2016). Vibrational spectroscopy of synthetic analogues to ankoleite, chernikovite and their solid solutions. *Spectrochimica Acta A* **156**, 143-150.
- 17/ Déjeant A., Galois L., Roy R., Calas G., Boekhout F., Phrommavanh V., Descostes M. (2016). Evolution and Environmental Impact of Uranium Mill Tailings at COMINAK mine, Niger: a Multi-Scale Approach. *Science Of The Total Environment* **545-546**, 340-352.
- 18/ Drozdak J., Leermakers M., Gao Y., Elskens M., Phrommavanh V., Descostes M. (2016). Novel speciation method based on Diffusive Gradients in Thin-Films for in situ measurement of Uranium in the vicinity of the former uranium mining sites. *Environmental Pollution* **214**, 114-123.

- 19/** Drozdak J., Leermakers M., Gao Y., Elskens M., Phrommavanh V., Descostes M. (2016). Uranium aqueous speciation in the vicinity of former uranium mining sites using Diffusive Gradients in Thin Films and Ultrafiltration techniques. *Analytica Chimica Acta* **913**, 94-103.
- 20/** Leermakers M., Phrommavanh V., Drozdak J., Gao Y., Nos J., Descostes M. (2016). DGT as a useful monitoring tool for radionuclides and trace metals in environments impacted by uranium mining: case study of the Sagnes wetland in France. *Chemosphere* **155**, 142-151.
- 21/** Reinoso-Maset E., Ly J. (2016). Study of uranium(VI) and radium(II) sorption at trace level on kaolinite using a multi-site ion exchange model. *Journal of Environmental Radioactivity* **157**, 136-148.
- 22/** Robin V., Sardini P., Mazurier, A., Regnault O., Descostes M. (2016). Effective porosity measurements of unconsolidated materials using nondestructive methods. *Engineering Geology* **205**, 24-29.
- 23/** Robin V., Tertre E., Regnault O., Descostes M. (2016). Dissolution of beidellite in acidic solutions: New insights on interface reactions and effect of crystal chemistry on smectite reactivity. *Geochimica et Cosmochimica Acta* **180**, 97-108
- 24/** Sardini P., Angileri A., Descostes M., Duval S., Oger T., Patrier P., Rividi N., Siitari-Kauppi M., Toubon H., Donnard J. (2016). Quantitative autoradiography of alpha particle emission in geo-materials using the Beaver™ system. Nuclear Instruments and Methods in Physics Research Section A: Accelerators, *Spectrometers, Detectors and Associated Equipment* **833**, 15-22.
- 25/** Boekhout F., Gérard M., Kanzari A., Michel A., Déjeant A., Galois L., Calas G., Descostes M. (2015). Uranium migration and retention during weathering of granitic waste rock piles. *Applied Geochemistry* **58**, 123-135.
- 26/** Drozdak J., Leermakers M., Gao Y., Phrommavanh V., Descostes M. (2015). Evaluation and application of Diffusive Gradients in Thin Films (DGT) technique using Chelex®-100, Metsorb™ and Diphonix® binding phases in uranium mining environments. *Analytica Chimica Acta* **889**, 71-81.
- 27/** Robin V., Hebert B., Beaufort D., Sardini P., Tertre E., Regnault O., Descostes M. (2015). Occurrence of authigenic beidellite in the Eocene sandy sediments of the Chu-Saryssu basin (Kazakhstan). *Sedimentary Geology* **321**, 39-48.
- 28/** Robin V., Tertre E., Beaufort D., Regnault O., Sardini P., Descostes M. (2015). Ion exchange reactions of major inorganic cations (H⁺, Na⁺, Ca²⁺, Mg²⁺ and K⁺) on beidellite: experimental results and new thermodynamic database. Towards a better prediction of contaminant mobility in natural environments. *Applied Geochemistry* **59**, 74-84.
- 29/** Baron F., Robin V., Beaufort D., Szenknect S., Dacheux N., Petit S. (2014). Use of near infrared spectroscopy for the identification of coffinite and uranothorite. *Journal of Near Infrared Spectroscopy* **22**, 149-152.
- 30/** Déjeant A., Bourva L., Sia R., Galois L., Calas G., Phrommavanh V., Descostes M. (2014). Field analyses of U and 226Ra in two uranium mill tailings piles from Niger using portable HPGe detector. *Journal of Environmental Radioactivity* **137**, 105-112.
- 31/** Reinoso-Maset E., Ly J. (2014). Study of major ions sorption equilibria to characterise the ion exchange properties of kaolinite. *Journal of Chemical & Engineering Data* **59**, 4000-4009.
- 32/** Sajih M., Bryan N.D., Vaughan D.J., Descostes M., Phrommavanh V., Nos J., Morris K. (2014). Adsorption of Radium and Barium on Goethite and Ferrihydrite: A kinetic and surface complexation modelling study. *Geochimica et Cosmochimica Acta* **146**, 150-163.
- 33/** Wang Y., Bagnoud A., Suvorova E., McGivney E., Chesaux L., Phrommavanh V., Descostes M., Bernier-Latmani R. (2014). Geochemical control on uranium(IV) speciation in a mining-impacted wetland. *Environmental Science & Technology* **48**(17), 10062-10070.
- 34/** Bordelet G., Beaucaire C., Phrommavanh V., Descostes M. (2013). Sorption Properties of Peat for U(VI) and 226Ra in U Mining Areas. *Procedia Earth and Planetary Science* **7**, 85-88.
- 35/** Cretaz F., Szenknect S., Clavier N., Vitorge P., Mesbah A., Descostes M., Poinssot C., Dacheux N. (2013). Solubility properties of synthetic and natural meta-torbernite. *Journal of Nuclear Materials* **442**, 195-207.
- 36/** Lestini L., Beaucaire C., Vercouter T., Descostes M. (2013). Radium uptake by recrystallized gypsum: An incorporation study. *Procedia Earth and Planetary Science* **7**, 479-482.
- 37/** Phrommavanh V., Leermakers M., de Boissezon H., Nos J., Koko M.B., Descostes M. (2013). Characterizing the transport of natural uranium and its decay product 226Ra, downstream from former mines in France. *Procedia Earth and Planetary Science* **7**, 693-696.
- 38/** Schmitt J.-M., Descostes M., Polak C. (2013). L'exploitation par ISR des gisements d'uranium de type Roll front : des interactions multiples avec les eaux souterraines. *Géologues* **179**, 54-58.
- 39/** Wang Y., Fruttschi M., Suvorova E., Phrommavanh V., Descostes M., Osman A.A.A., Geipel G., Bernier-Latmani R. (2013). U(IV) release from a mining-impacted wetland. *Nature Communications* **4**, 2942.
- 40/** Jones M.J., Butchins L.J., Charnock J.M., Patrick R.A.D., Small J.S., Vaughan D.J., Wincott P.L., Livens F.R. (2011). Reactions of radium and barium with the surfaces of carbonate minerals. *Appl. Geochem.* **26**, 1231-1238.