

# Liste de publications et communications

## 2018

- *Examination of water quantification and incorporation in Transition Zone Minerals: wadsleyite, ringwoodite and phase D using ERDA (Elastic recoil detection Analysis)*, N. Bolfan-Casanova, F. Schiavi, C. Raepsaet, D. Novella, H. Bureau, H. Khodja, S. Demouchy, *Front. Earth Sci.*, 19 June 2018 | <https://doi.org/10.3389/feart.2018.00075>
- *Supercrystals of magnetic nanoparticles as promising candidates for the superferromagnetic state*, V. Russier, J. Richardi, I. Lisiecki, A.T. Ngo, C. Salzemann, M. Konczykowski, C. Raepsaet, V. Mosser and S. Nakamae, 03 - 07 September, 2018 - Mainz, Germany
- *Growth and Dissolution of Diamonds in the Lithosphere*, H. Bureau, C. Raepsaet, K. Armstrong, G. Manthilake, EMPG XVI, 17-21 June 2018, Clermont-Ferrand, France
- *The linked fate of H and C during planetary core mantle differentiation*, V. Malavergne, H. Bureau, C. Raepsaet, F. Gaillard, M. Poncet, S. Surblé, D. Sifré, S. Shcheka, C. Fourdrin, D. Deldicque, H. Khodja, EMPG XVI, 17-21 June 2018, Clermont-Ferrand, France
- *Low hydrogen contents in the cores of terrestrial planets*, V. Clesi, M.A. Bouhifd, N. Bolfan-Casanova, G. Manthilake, F. Schiavi, **C. Raepsaet**, H. Bureau, H. Khodja and D. Andrault, *Sci Adv* 4 (3), e1701876, DOI: 10.1126/sciadv.1701876
- *Bonding of xenon to oxygen in magmas at depth*, C. Leroy, C. Sanloup, H. Bureau, B.C. Schmidt, Z. Konôpková, **C. Raepsaet**, *Earth and Planetary Science Letters* 484(2018)103–110

## 2017

- *Development of a new device to investigate the magnetic properties of supercrystals of nanoparticles based on miniaturized quantum well Hall sensors*, C. Raepsaet, 3nano conference, 10-14 December 2017, Paris, France
- *Quest for superferromagnetic state – Experimental approach.*, S. Nakamae, C. Raepsaet, Symposium MACALONS, 30 March 2017, Paris, France
- *Study of secondary hydriding at high temperature in zirconium based nuclear fuel cladding tubes by coupling information from neutron radiography/tomography, electron probe micro analysis, micro elastic recoil detection analysis and laser induced breakdown spectroscopy microprobe*, J.C. Brachet, D. Hamon, M. Le Saux, V. Vandenberghe, C. Toffolon-Masclat, E. Rouesne, S. Urvoy, J.L. Béchade, **C. Raepsaet**, J.L. Lacour, G. Bayon, F. Ott, *Journal of Nuclear Materials* 488 (2017) 267e286

- *Chlorine in wadsleyite and ringwoodite: An experimental study*, M. Roberge, H. Bureau, N. Bolfan-Casanova, **C. Raepsaet**, S. Surble, H. Khodja, A.L. Auzende, P. Cordiere, G. Fiquet, *Earth and Planetary Science Letters* 467(2017)99–107

## 2016

- *Mesures par microsonde nucléaire des concentrations en hydrogène et en deutérium dans les couches d'oxyde formées sur Zircaloy-4*, M. Tupin, F. Martin, **C. Raepsaet**. Rapport CEA DEN/DANS/DMN/SEMI/LM2E/NT/16-04/A.
- *Consolidation des quantifications en lithium et en bore mesurées sur les couches d'oxyde d'alliages de Zr irradiés en REP*, M. Jublot, K. Colas, P. Bossis, **C. Raepsaet**. Rapport CEA DEN/DANS/DMN/SEMI/LM2E/NT/2016-06/A.
- *Magnetic nanoparticles supracrystals as candidates for the dipolar superferromagnetic state.*, V Russier, J Richardi, A T Ngo, C Salzemann, S Nakamae, M Konczykowski, **C Raepsaet** and I Lisiecki, *JEMS* 2016, 21-26 August 2016, Glasgow, United Kingdom
- *The composition of nanogranitoids in migmatites overlying the Ronda Peridotites (Betic Cordillera, S Spain): the anatectic history of a polymetamorphic basement*, A. Acosta-Vigil, A. Barich, O. Bartoli, C.J. Garrido, B. Cesare, L. Remusat, S. Poli, **C. Raepsaet**, EGU General Assembly, 17-22 April 2016, Vienna, Austria

## 2015

- *The composition of nanogranitoids in migmatites overlying the Ronda peridotites (Betic Cordillera, S Spain): the anatectic history of a polymetamorphic basement*, A. Acosta-Vigil, A. Barich, O. Bartoli, C.J. Garrido, B. Cesare, L. Remusat, S. Poli, **C. Raepsaet**, *Contrib Mineral Petrol* (2016) 171: 24. <https://doi.org/10.1007/s00410-016-1230-3>
- *Ion Beam Analysis of light elements in thin films: common uses and capabilities*, P. Berger, H. Khodja, **C. Raepsaet**, S. Surblé, 78<sup>th</sup> IUVSTA Workshop, Braga, Portugal, 5-9 sept 2015
- *Is the transition zone a deep reservoir for fluorine?* M. Roberge, H. Bureau, N. Bolfan-Casanova, D.J. Frost, **C. Raepsaet**, S. Surble, H. Khodja, A.L. Auzende, G. Fiquet, *Earth and Planetary Science Letters* 429 (2015) 25–32
- *Experimental study and thermodynamic description of the erbium–hydrogen–zirconium ternary system*, A. Mascaro, C. Toffolon-Masclat, **C. Raepsaet**, J.C. Crivello, J.M. Joubert, *Journal of Nuclear Materials* 456(2015)7–16
- *Neutron Scattering and Other Nuclear Techniques for Hydrogen in Materials, Chapitre 10 : Elastic Recoil Detection Analysis*, P. Berger, **C. Raepsaet** and H. Khodja, Ed. Springer
- *Modern and past volcanic degassing of iodine*, H. Bureau, A.L. Auzende, M. Marrochi, **C. Raepsaet**, P. Munsch, D. Testemale, M. Mezouar, S. Kubsy, M. Carrière, A. Ricolleau, accepted for publication in *Geochimica et Cosmochimica Acta*

- *Comportement des éléments légers dans les matériaux du nucléaire : apport de la microsonde nucléaire et de sa ligne chaude CASIMIR*, **C. Raepsaet**, H. Khodja, Rencontre scientifique MINOS, Saclay, 11 juin 2015

## 2014

- *De l'eau à l'intérieur de la Terre : Une approche numérique et expérimentale couplée*, M. Blanchard, H. Bureau, E. Balan, C. Sanloup, J. Ingrin, **C. Raepsaet**, H. Khodja, document INSU 2014
- *Clumped fluoride-hydroxyl defects in forsterite: Implications for the upper-mantle*, C. Crépon, M. Blanchard, H. Bureau, C. Sanloup, A. C. Withers, H. Khodja, S. Surblé, **C. Raepsaet**, K. Béneut, C. Leroy, P. Giura, E. Balan, *Earth and Planetary Science Letters* 390(2014)287-295
- *How Mercury can be the most reduced terrestrial planet and still store iron in its mantle*, V. Malavergne, P. Cordier, K. Righter, F. Brunete, B. Zanda, A. Addad, T. Smith, H. Bureau, S. Surblé, **C. Raepsaet**, E. Charon, R.H.Hewins, *Earth and Planetary Science Letters* 394(2014)186-197
- *Development of a device for helium thermal diffusion investigations by IBA in self-irradiated nuclear glass*, **C. Raepsaet**, S. Peugeot, H. Khodja, G. Gutierrez, J. Hoarau, T. Sauvage. ECAART11, 8-13 septembre 2013, Namur, Belgique. *Nuclear Instruments and Methods in Physics Research Section B*, 331(2014)74-77
- *The distribution of H<sub>2</sub>O between silicate melt and nominally anhydrous peridotite and the onset of hydrous melting in the deep upper mantle*, D. Novella, D.J. Frost, E.H. Hauri, H. Bureau, **C. Raepsaet**, M. Roberge, *Earth and Planetary Science Letters* 400(2014)1-13
- *Experimental study of UC polycrystals in the prospect of improving the as-fabricated sample purity*, G. Raveu, G. Martin, O. Fiquet, P. Garcia, G. Carlot, H. Palanchar, A. Bonnin, H. Khodja, **C. Raepsaet**, T. Sauvage, M.F. Barthe, *Nuclear Instruments and Methods in Physics Research Section B*, 341(2014)72-76
- *Incorporation of Xenon in magmas at depth*, H Leroy C., Sanloup S., Bureau H., Schmidt B., Konopokova Z. and **Raepsaet C.**, AGU fall meeting, décembre 2014, San Francisco, USA
- *H<sub>2</sub>O quantitative analysis of transition zone minerals wadsleyite and ringwoodite by Raman spectroscopy*, D. Novella, N. Bolfan-Casanova, H. Bureau, **C. Raepsaet**, G. Montagnac., AGU fall meeting, décembre 2014, San Francisco, USA
- *Analysis of H in natural and experimental nominally anhydrous minerals: a comparison of elastic recoil detection analysis, infrared and SIMS measurements*, Withers, Mosenfelder, Bureau, **Raepsaet** and Hirschmann, AGU fall meeting, décembre 2014, San Francisco, USA
- *Ion Beam Analysis in Extreme Environment: investigation of radioactive samples at the micrometric scale*, **C. Raepsaet**, H. Khodja, P. Bossis, S. Peugeot, CAARI, invited talk, San Antonio, TX, mai 2014

- *Characterization Techniques to Quantify Hydrogen Content, Hydride Morphology and Orientation on Unirradiated and Irradiated Zirconium Alloy Cladding*, K. Colas, J-C. Brachet, P. Bossis, **C. Raepsaet**, S. Allegre, O. Rabouille, D. Hamon, J-L. Béchade, C. Cappelaere, D. Gilbon, 2nd Zirconium Alloy Cladding/Hydride Workshop, June 10-12, 2014, Jackson Hole, WY, USA
- *SOUS QUELLE FORME SE TROUVE L'HYDROGÈNE IMPLANTÉ ? COMPLÉMENTARITÉ DES MÉTHODES  $\mu$ ERDA,  $\mu$ RAMAN ET SIMS*, L. Beck, D. Brimbal, T. Loussouarn, P. Trocellier, S. Miro, **C. Raepsaet**, F. Jomard, Jomard, IBAF 2014, 7-10 octobre 2014, Obernai, France

## 2013

- *C/N AND OTHER ELEMENTAL RATIOS OF CHONDRITIC POROUS IDPS AND A FLUFFY CONCORDIA MICROMETEORITE*, Smith T., Nakamura-Messenger K., Messenger S., Keller LP., Khodja H., **Raepsaet, C.**, Wirick S., Flynn GJ., Taylor S., Engrand C., METEORITICS & PLANETARY SCIENCE, 48(2013)A322
- *Extraterrestrial materials examined by mean of nuclear microprobe*, H. Khodja, T. Smith, C. Engrand, G. Herzog, **C. Raepsaet**, Nuclear Instruments and Methods in Physics Research B 306 (2013) 245–248
- *Influence de l'hydrogène sur les propriétés en traction d'un assemblage composite Zy2/Gd/Zy2*, C. Toffolon-Masclat, **C. Raepsaet**, P. Wident. Rapport CEA DEN/DANS/DMN/SRMA/LA2M/NT/2013-3389/A.
- *Characterization of chondritic porous IDPs and an ultracarbonaceous micrometeorite*, T. Smith, K. Nakamura-Messenger, H. Khodja, **C. Raepsaet**, S. Wirick, G. Flynn, S. Taylor, C. Engrand, J. Duprat, and G.F. Herzog. 76<sup>th</sup> annual meeting of the Meteoritical Society, 29 juillet - 2 août 2013, Edmonton, Canada.
- *F and Cl solubilities in wadsleyite and ringwoodite*, M. Roberge, H. Bureau, N. Bolfan Casanova, D. Frost, **C. Raepsaet**, S. Surblé, H. Khodja and G. Fiquet. Goldschmidt conference, 25-30 août 2013, Florence, Italie.
- *Microstructure and properties of a 3-layers nuclear fuel cladding prototype containing erbium as a neutronic burnable poison*, J.C. Brachet, P. Olier, V. Vandenberghe, S. Urvoy, D. Hamon, T. Guilbert, A. Mascaro, C. Toffolon-Masclat, M. Tupin, B. Bourdilliau, **C. Raepsaet**, J.M. Joubert, J.L. Aubin. 17TH INTERNATIONAL SYMPOSIUM ON ZIRCONIUM IN THE NUCLEAR INDUSTRY, FEB. 03-07 2013, HYDERABAD, INDIA. Publication acceptée, en cours
- *Experimental study and thermodynamic assessment of the erbium-hydrogen binary system*, A. Mascaro, C. Toffolon-Masclat, **C. Raepsaet**, J.M. Joubert. CALPHAD2012, 3-8 juin 2012, Berkeley, California, USA  
Calphad, Volume 41, June 2013, Pages 50–59

## 2012

- *Corrosion of M5 in PWRs: Quantification of Li, B, H and Nb in the Oxide Layers formed Under Different Conditions*, P. Bossis, **C. Raepsaet**, M. Tupin, C. Bisor-Melloul, H. Khodja, M. Blat, A.

Ambard, A. Miquet, D. Kaczorowski, P. Barberis, S.W. Dean, ASTM 2011, Journal of ASTM vol9

- *The Halogen's History of the Early Earth*, H. Bureau, **C. Raepsaet**, P. Munsch,, A.L. Auzende, D. Testemale, M. Mézouar, S. Kubsy, M. Carrière, A Ricolleau, G. Fiquet, accepted at the AGU fall meeting, 3-7 décembre 2012, San Francisco, USA
- *Etude par  $\mu$ -ERDA du comportement de l'hydrogène dans des gaines de combustible REP tri-couches prototypes avec addition d'erbium (poison consommable)*, **C. Raepsaet**, J.C. Brachet, D. Hamon, IBAF2012, Cadarache, France, 11-14 /12/2012
- *Nuclear Reaction Analysis of light elements inside nuclear fuels*, G. Martin, H. Khodja, G. Carlot, **C. Raepsaet**, C. Sabathier, O. Fiquet, H. Palancher, G. Raveu, P. Garcia, T. Sauvage, I. Vickridge, P. Desgardin, S. Sorieul, M.F. Barthe, P. Moretto C. Ramboz, E. Gilabert, IBAF2012, Cadarache, France, 11-14 /12/2012
- *Etude par NRA de l'oxydation d'échantillons d'UC*, G. Raveu, G. Martin, O. Fiquet, P. Garcia, G. Carlot, H. Khodja, **C. Raepsaet**, T. Sauvage, M-F. Barthe, IBAF2012, Cadarache, France, 11-14 /12/2012
- *Extraterrestrial materials examined by mean of nuclear microprobe*, H. Khodja, T. Smith, C. Engrand, G. Herzog, **C. Raepsaet**, ICNMTA 2012, Lisbonne, Portugal, 22-27 /07/2012
- *Characterization of 81P/WILD 2 particles C2067,1,111,6.0 and C2067,1,111,8.0.*, T. Smith, H. Khodja, **C. Raepsaet**, M. J. Burchell, G. J. Flynn, G. F. Herzog, J. Park, F. Lindsay, K. Nakamura-Messenger, L. P. Keller, S. Taylor, A. Westphal, LPSC 2012, The Woodlands, Texas, USA, 19-23/03/2012
- *Capabilities of EPMA and  $\mu$ -ERDA to quantify the micro-chemical elements partitioning within nuclear fuel cladding materials after LOCA transient*, J.C. Brachet, D. Hamon, **C. Raepsaet**, HPG meeting on LOCA, Lyon, France, 29-30/05/2012
- *Expertises métallurgiques (dont analyses «  $\mu$ -ERDA » et «  $\mu$ -LIBS ») réalisées sur gaine M5™, avec noyau alumine, ayant subi un transitoire APRP de type semi-intégral « segmenté »*, J.C. Brachet, D. Hamon, E. Rouesne, **C. Raepsaet**, J.L. Lacour, note technique CEA, DEN/DANS/DMN/SRMA/LA2M/NT/2012-3262/ A, février 2012
- *La microsonde nucléaire, un outil performant pour l'étude des éléments légers*, **C. Raepsaet**, séminaire IMPMC, 25 juin 2012
- *Redistribution (« Partitioning ») de l'oxygène, de l'hydrogène (et des principaux éléments d'addition) associée à la transformation de phases  $\beta$ Zr  $\rightarrow$   $\alpha$ Zr lors du refroidissement d'un alliage de Zircaloy-4 préhydruré, après oxydation en vapeur à haute température ; conséquences sur le durcissement local et la ductilité résiduelle*, J.C. Brachet, D. Hamon, J.L. Béchade, P. Forget, C. Toffolon-Masclat, **C. Raepsaet**, J.P. Mardon, B. Sebbari, Journées Annuelles de la SF2M 2012, Paris, France, 29-31/10/2012
- *DiffAbs at SOLEIL: a X-ray beamline for characterisation of materials under extreme conditions by combination of diffraction, absorption and fluorescence spectroscopies*, D. Thiaudière, C. Mocuta, S. Réguer, F. Alves, H. Bureau, E. Foy, P. Munsch, A. Somogyi, G. Simon, **C. Raepsaet**, S. Kubsy, SOLEIL workshop, Saclay, France, 16-17/01/2012

- *Calibration of infrared spectroscopy by elastic recoil detection analysis of H in synthetic olivine*, A.C. Withers, H. Bureau, **C. Raepsaet**, M.M. Hirschmann, *Chemical Geology* 334 (2012) 92–98

## 2011

- *Earth's volatiles history: the case of iodine*, H. Bureau, M. Marocchi, P. Munsch, A.L. Auzende, **C. Raepsaet**, M. Mézouar, D. Testemale, S. Kubsky, M. Carrière, A. Ricolleau, G. Fiquet, accepted at the AGU fall meeting, 5-12 décembre 2011, San Francisco, USA
- *Quantification of H in olivine: Direct calibration of FTIR and SIMS by ERDA*, A.C. Withers, M.M. Hirschmann, H. Bureau and **C. Raepsaet**, accepted at the AGU fall meeting, 5-12 décembre 2011, San Francisco, USA
- *Experimental and Thermodynamic Study of the Er-H system*, A. Mascaro, C. Toffolon-Masclat, J.M. Joubert, **C. Raepsaet**. CALPHAD2011, 22-27 mai 2011, Rio de Janeiro, Brésil
- *Experimental study of the Er-Zr-H ternary system at 350°C*, A. Mascaro, C. Toffolon-Masclat, J.M. Joubert, **C. Raepsaet**. EUROMAT 2011, 12-15 septembre 2011, Montpellier, France
- Helium behaviour in polycrystalline uranium dioxide, DIMAT 2011, G. Martin, C. Sabathier, P. Garcia, H. Khodja, **C. Raepsaet**, T. Sauvage, G. Carlot, P. Desgardins. 3-8 juillet 2011, Dijon, France
- *Irradiation damage effects on helium migration in sintered uranium dioxide*, DIMAT 2011, G. Martin, C. Sabathier, G. Carlot, P. Desgardins, **C. Raepsaet**, T. Sauvage, H. Khodja, P. Garcia, 20<sup>th</sup> IBA, 10-15 avril 2011, Itapema, Brésil
- *Quantification of the chemical elements partitioning within pre-hydrated Zircaloy-4 after high temperature steam oxidation as a function of the final cooling scenario (LOCA conditions) and consequences on the post-quench material (local) hardening and residual ductility*, J.C. Brachet, D. Hamon, **C. Raepsaet**, IAEA Technical Meeting on Fuel Behaviour Under Transient and LOCA, 16-19 mai 2011, Tokai-mura, Japon
- *Oxygen, Hydrogen and Main Alloying Chemical Elements Partitioning Upon Alpha\_Beta Phase Transformation in Zirconium Alloys*, J.C. Brachet, C. Toffolon-Masclat, D. Hamon, T. Guilbert, G. Trego, J. Jourdan, A. Stern, **C. Raepsaet**, *Solid State Phenomena Vols. 172-174 (2011) pp 753-759*
- *Synthèse des études métallurgiques sur l'influence du scénario de refroidissement post-oxydation à Haute Température (conditions APRP) sur le Zircaloy-4 pré-hydruré à 600 ppm.*, J.C. Brachet, D. Hamon, J.-L. Béchade, P. Forget, T. Guilbert, H. Dridi, **C. Raepsaet**, rapport CEA DEN/DANS/DMN/SRMA/LA2M/NT/2011-3210 /A

## 2010

- *La microanalyse nucléaire des matériaux : voir l'hydrogène sous toutes ses formes ?*, P. Berger, **C. Raepsaet**, H. Khodja, (2009). Conférence internationale sur la Fragilisation par l'hydrogène, 3ATS, Paris, nov. 2010

- *Bromine cycle in subduction zones through in situ Br monitoring in diamond anvil cells*, H. Bureau, E. Foy, **C. Raepsaet**, A. Somogyi, P. Munsch, G. Simon, S. Kubsy. *Geochimica et Cosmochimica Acta* 74 (2010) 3839–3850
- *Modélisation du transfert de trois métaux Zn, Pb et Cd dans un dépôt fluvio-glaciaire carbonaté*, L. Lassabatère, L. Spadini, **C. Raepsaet**, L. Février, C. Delolme, R. Galvez-Cloutier, T. Winiarski, BLPC n°276 avril-juin 2009
- *Modeling evaluation of the transfer of three metals Zn, Pb and Cd in a carbonated fluvio-glacial deposit*, L. Lassabatère, L. Spadini, **C. Raepsaet**, L. Février, C. Delolme, R. Galvez-Cloutier, T. Winiarski, BLPC n°276 April-June 2010
- *Expertise métallurgique sur tronçons de gaine M5™ avec noyau en Alumine éclatés en rampe dans EDGAR puis ré-oxydés à 1100°C et 1200°C dans Dezirox-1 (problématique : hydruration secondaire lors de transitoires APRP)*, J.-C. Brachet, E. Rouesne, D. Hamon, **C. Raepsaet**, Document technique DEN DEN/DANS/DMN/SRMA/LA2M/NT/2010-3152/A
- *Oxygen, Hydrogen and Main Alloying Chemical Elements Partitioning Upon Alpha<->Beta Phase Transformation in Zirconium Alloys*, J.C. Brachet, C. Toffolon-Masclat, D. Hamon, T. Guilbert, G. Trego, J. Jourdan, A. Stern, **C. Raepsaet**, PTM2010
- *Hydrogen contents in clinopyroxene from Martian meteorites (Nakhlites) using elastic Recoil Detection Analysis*, A. Carraro, A.M. Fioretti, M.C. Domeneghetti, **C. Raepsaet**, H. Bureau, F. Camara, C.A. Goodrich, presentation A. Carraro au congrès de la Societa Italiana di Mineralogia Congress, Ferrara, Italie, 13-15 /09/2010
- *Corrosion of M5® in PWRs: Quantification of Li, B, H and Nb in the oxide layers formed under different conditions*, Ph. Bossis, **C. Raepsaet**, M. Tupin, C. Bisor-Melloul, H. Khodja, M. Blat, A. Ambard, A. Miquet, and D. Kaczorowski, Zr in the Nuclear Industry: 16th International Symposium – Chengdu – May 10th-13th, 2010
- *Helium release in uranium dioxide in relation to grain boundaries and free surfaces*, G. Martin, P. Garcia, C. Sabathier, G. Carlot, T. Sauvage, P. Desgardin, **C. Raepsaet**, H. Khodja, IBA2009, september 7-11, 2009, Cambridge (United Kingdom), NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION B-BEAM INTERACTIONS WITH MATERIALS AND ATOMS, 268 (11-12): 233-2137 (2010)

## 2009

- *Calibration of the infrared molar absorption coefficients for H in olivine, clinopyroxene and rhyolitic glass by elastic recoil detection analysis*, Aubaud C., Bureau H., **Raepsaet C.**, Khodja H., Hirschmann M.M., Withers A. C. and Bell D. R., (2009). *Chem. Geol.* (2009) 262, 78-86
- *Determination of hydrogen content in geological samples using elastic recoil detection analysis (ERDA)*, H. Bureau, **C. Raepsaet**, H. Khodja, A. Carraro, C. Aubaud, *Geochimica et Cosmochimica Acta* 73 (2009) 3311–3322
- *In situ experimental study of subduction zone fluids using diamond anvil cells*, H. Bureau, E. Foy, A. Somogyi, P. Munsch, G. Simon, **C. Raepsaet**, S. Kubsy, 4th Soleil User's Meeting, January 21-22, 2009, Palaiseau (France)

- *Water content in pyroxene and olivine from martian meteorites and comparison with terrestrial analogues: a new project*, A. Carraro, MC Domeneghetti, AM Fioretti, CA Goodrich, **C Raepsaet**, Geoitalia 2009, September 9-11, 2009, Rimini (Italy)
- *Characterization of 81P/WILD 2 particles C2103,1,98,1,0, C2103,1,98,2,0, and C2065,1,97,1,0.*, H. Khodja, **C. Raepsaet**, M. J. Burchell, G. J. Flynn, Z. Gainsforth, G. F. Herzog, L. P. Keller, A. Lanzirotti, W. Rao, S. R. Sutton, S. Taylor, and A. Westphal, 40<sup>th</sup> Lunar and Planetary Science Conference, March 23-27, 2009, The Woodlands, Texas, USA
- *Ion beam analysis of radioactive samples*, **Raepsaet C.**, Khodja H, Bossis P, et al., 11th International Conference on Nuclear Microprobe Technology and Applications/3rd International Workshop on Proton Beam Writing, JUL 20-25, 2008 Debrecen, HUNGARY, NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION B-BEAM INTERACTIONS WITH MATERIALS AND ATOMS Volume: 267 Issue: 12-13 Pages: 2245-2249 Published: JUN 15 2009
- *The use of NRA to study thermal diffusion of helium in (U,Pu)O<sub>2</sub>*, Pipon Y, **Raepsaet C.**, Roudil D, et al. 11th International Conference on Nuclear Microprobe Technology and Applications/3rd International Workshop on Proton Beam Writing, JUL 20-25, 2008 Debrecen, HUNGARY, NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION B-BEAM INTERACTIONS WITH MATERIALS AND ATOMS Volume: 267 Issue: 12-13 Pages: 2250-2254 Published: JUN 15 2009
- *Study of the d+B-11 system differential cross-sections for NRA purposes*, Kokkoris M., Vlastou, R., Papadopoulos C., Diakaki M., Foteinou V., Misailides P., Aslanoglou X., Lagoyannis A., Harissopoulos S., **Raepsaet C.**, IBMM2008, 16th International Conference on Ion Beam Modification of Materials, AUG 31-SEP 05, 2008 Dresden, GERMANY, NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION B-BEAM INTERACTIONS WITH MATERIALS AND ATOMS Volume: 267 Issue: 8-9 Pages: 1740-1743 (2009)

## 2008

- *Quantification and local distribution of hydrogen within Zircaloy-4 PWR nuclear fuel cladding tubes at the nuclear microprobe of the Pierre Sue Laboratory from  $\mu$ -ERDA*, **Raepsaet, C**; Bossis, P; Hamon, D; Bechade, JL; Brachet, JC, NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION B-BEAM INTERACTIONS WITH MATERIALS AND ATOMS, 266 (10): 2424-2428 MAY 2008, Proceedings ECAART2007, Florence (Italie)
- *$\mu$ -Erda developments in order to improve the water content determination in hydrous and nominally anhydrous mantle phases*, **Raepsaet, C**; Bureau, H; Khodja, H; Aubaud, C; Carraro, A., NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION B-BEAM INTERACTIONS WITH MATERIALS AND ATOMS, 266 (8): 1333-1337 APR 2008, Proceedings IBA2007, Hyderabad (Inde)
- *In Situ experimental study of subduction zone fluids using diamond anvil cells*, H. Bureau, E. Foy, A. Somogyi, P. Munsch, G. Simon, **C. Raepsaet**, S. Kubsy, AGU 2008, San Francisco, déc. 2008
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