Scientific publications – directly related to SAMOFAR

Journal papers


9. Tano, Mauricio, Pablo Rubiolo, Olivier Doche ; Progress in modeling solidification in molten salt coolants; Modelling and Simulation in Materials Science and Engineering, vol 25, no. 7 (2017) https://doi.org/10.1088/1361-651X/aa8345


SUBMITTED


13. Sergii Nichenko, Xiancai Lu, Bjørn Winkler, Dmitrii Kulik, Xin Liu, Victor Vinograd, Emulation of short-range ordering within the Compound Energy Formalism: Application to the calcite-magnesite solid solution, Calphad journal. (submitted)
Conference papers/oral presentations/posters

8. Duran-Klie Gabriela, Rodrigues Davide, Delpech Sylvie ; Electrochemical behavior of U(IV) in LiF-ThF4 molten salt; oral presentation at Atalante 2016, juin 2016, Montpellier, France
9. Duran-Klie, G., D. Rodrigues and S. Delpech, Development and Evaluation of a dynamic reference electrode for the redox potential measurements in fluoride molten salts, poster presented at the 15th Int. Conf. on High Temperature Materials Chemistry (HTMC15), March 29 – April 1, 2016, Orléans, France
10. Duran-Klie Gabriela, Rodrigues Davide, Delpech Sylvie; Etude électrochimique du couple redox U(IV)-U(III) dans un mélange fondu de LiF-ThF4; XVe journées Nationales de Radiochimie et de Chimie Nucléaire, septembre 2016, Nice, France
11. Gabriela Duran−klie, Davide Rodrigues, Sylvie Delpech ; Comportement électrochimique de l'iode dans l'eutectique LiF−ThF4 fondu à 650°C, Journées d’Electrochimie, Bordeaux, juin 2017


32. Wang, S., M. Massone, A. Rineiski, E. Merle-Lucotte, et al., A passive decay heat removal system for emergency draining tanks of molten salt reactors, The 17th International Topical Meeting on Nuclear Reactor Thermal Hydraulics (NURETH-17), Xi’an, China, September 3 - 8, 2017

SUBMITTED

33. S. Mastromarino, M. Rohde, O. Benes, J.L. Kloosterman, Development Of A High Temperature Ultrasonic Viscometer For Molten Salt; Poster at the NuMat conference, 14–18 October 2018, Seattle, USA

34. S. Mastromarino, E. Capelli, A.L. Smith, O. Benes, J.L. Kloosterman, Molten Fuel Salt Interaction With Water; Oral presentation at the NuMat conference, 14–18 October 2018, Seattle, USA

Scientific publications – indirectly related to SAMOFAR


PhD theses


BSc / MSc theses

1. Bakker, Jelle, Wall-Distance Calculation for Turbulence Modelling, BSc thesis, TU Delft July 2018

2. Boed, Gijs de, Extraction of noble metals in a Molten Salt Reactor by helium bubbling, BSc thesis, TU Delft, August 2018
3. Braskamp, Laurens, Thermochemistry of Ruthenium in Molten Fluoride Salts, Metal or Melt?, BSc thesis, TU Delft, August 2018
7. Daronnat, Marceau, "Etude de la faisabilité d'une extraction passive de la puissance résiduelle du réacteur MSFR", LPSC-IN2P3-CNRS Grenoble, 2018 (L3 level)
8. Deurvorst, Floris, Design of Cooling Fins on the Freeze Plug, BSc thesis, TU Delft, June 2017
12. Dieuaide, Manon, “SAMOFAR Molten Salt Fast Reactor reprocessing unit design”, MSc thesis, CEA Saclay, 2018
18. Koks, Iris, Melting behaviour of the freeze plug in a molten salt fast reactor, BSc thesis, July 2016 (PDF)
22. Oud, Thomas, Elastic wave simulation for buffer rod tapering, BSc thesis, TU Delft, August 2017
23. Oudenaren, Gilliam van, Study of cooling requirements in the fertile blanket and the freeze-plugs of the MSFR, BSc thesis, TU Delft, July 2018
24. Passeiaque, Florian, "Interfaçage du code système LiCore du réacteur MSFR", LPSC-IN2P3-CNRS/CORYS TESS, Grenoble France, 2018 (M1 level)
25. Reuver, Reindert de, Temperature dependence of the attenuation and group velocity of ultrasonic waves in tungsten, BSc thesis, TU Delft, July 2018
27. Pettersen, Eirik Eide, Coupled multi-physics simulations of the MSFR using TRACE-PARCS, 2016, Universite Paris-Saclay
29. Schuringa, Olivier, Density and viscosity calculation using ultrasonic wave propagation, BSc thesis, TU Delft, December 2017
31. Servell, Paul, from 6th May to 5th August 2018, Grenoble-INP Phelma, Internship at KIT
32. Shafer, Devaja, Design and Melting Behavior of the MSFR Freeze Plug, TU Delft, January 2018
34. Sorby, Brian, "Analyse de sûreté du réacteur à sels fondus MSFR: analyse FFMEA de la couverture fertile et du circuit intermédiaire", LPSC-IN2P3-CNRS Grenoble, 2017 (M1 level)
35. Swaroop, Parth, Design of a Freeze Plug for the Molten Salt Fast Reactor (MSFR), MSc thesis, TU Delft, August 2016 (PDF)
38. Van den Bergh, Olivier, Melting behaviour of the freeze plug in a molten salt fast reactor, BSc thesis, TU Delft, July 2016 (PDF)
39. Vozarova, Nikoleta, Behaviour of fission products in the molten salt reactor fuel, 2016, ETH Zurich (done at ITU)

Dissemination activities

4. Press release sent to Dutch Physics and Chemical Societies, Publishers of popular magazines and Partners (PDF)
6. David Dalton (NUCNET), Molten Salt Reactor Research Programme Begins In Europe, NUCNET 176, 7 Sep 2015 (PDF), http://www.nucnet.org/all-the-news/More?skip=500 (upon Login)
9. Interview by Jan Leen Kloosterman about Molten Salt Reactors by the Dutch news broadcast 'Een Vandaag', Nov 5, 2015 https://www.youtube.com/watch?v=OW8OZ8P6_1c
11. ‘Europe has a Thorium MSR Project – SAMOFAR’, News item on IThEO.org, Apr 17 2015 http://www.itheo.org/articles/europe-has-thorium-msr-project-samofar
12. Can Europe be the first to build an MSR reactor?, News item on IThEO.org, Nov 25, 2015 http://www.itheo.org/articles/can-europe-be-first-build-msr-reactor
15. Het vuur van Thor, Bits&Chips 9, Nov/Dec 2015, p.3 (Opinion; in Dutch) (PDF)
16. De (bijna) vergeten nuclaire optie, Bits&Chips 9, Nov/Dec 2015, p. 36-39 (Theme; in Dutch) (PDF)


26. Jiří Křepel and Boris Homburger, poster about MSR at the PSI Open Day, 18 October 2015


28. 10 October 2016, PSI web, Current topics from our research, Molten salt reactors – exploring an alternative, Text: Paul Scherrer Institute/Laura Hennemann (Jiri Krepel and Andreas Pautz helping) [https://www.psi.ch/media/molten-salt-reactors-exploring-an-alternative](https://www.psi.ch/media/molten-salt-reactors-exploring-an-alternative)


31. Grenoble MSFR team attended the preview version of “Thorium: the far side of nuclear power” by producer Myriam Tonelotto at Citizen Films made with Arte TV in Lyon the September 10, 2016, where the whole Grenoble MSFR team was invited (http://www.petit-bulletin.fr/lyon/cinema-article-55256+-Teleactivite+au+Com%C5%93dia+en+presence+de+Jerome+Jouvray.html)


33. Daniel Heuer, participation in the projection and discussion around the movie organized by the scientific journalist french association in Paris in January 19th (https://www.ajspi.com/fr/agenda/debat-sur-les-projets-de-reacteurs-nucleaires-a-sels-fondus-de-thorium)


41. Eric van der Walle (based on interview with Jan Leen Kloosterman), Veiligere kernenergie kan, maar komt het er ook?, NRC, 6 Jan (2018).

42. Marco Visscher (based on interview with Jan Leen Kloosterman), Gaat Thorium de wereld redden, Vrij Nederland, 22 Dec (2017).

43. Tomas van Dijk (based on interview with Jan Leen Kloosterman), 'Cheap nuclear electricity without long-lived radioactive waste, Delta, 6 Sep (2017).


47. Steve Gilmann (based on interview with Jan Leen Kloosterman), Supercritical CO2, Molten Salt could stop a nuclear meltdown before it begins, HORIZON, The EU Research & Innovation Magazine, 24 February (2017).


Social media


4. Launch of SAMOFAR Youtube channel, 25 Feb 2017, [https://www.youtube.com/channel/UCd2wCkwQwTaxKgibxWcAg0Q](https://www.youtube.com/channel/UCd2wCkwQwTaxKgibxWcAg0Q)


Presentations at GIF meetings

1. Benes, Ondrej, “EC-JRC update on MSR activities”, Presentation at the GIF SSC-MSR meeting, June 2016, Grenoble, France
2. Ondrej Benes, “MSR contribution to GIF”, Presentation at the 23rd GIF SSC-MSR meeting, Jan 2017, Villigen, Switzerland
3. Kloosterman, Jan Leen, “SAMOFAR project”, Presentation at the GIF SSC-MSR meeting, June 2016, Grenoble, France
4. Kloosterman, Jan Leen, “The EU SAMOFAR project goals and contents”, Presentation at the 23rd GIF SSC-MSR meeting, Jan 2017, Villigen, Switzerland
5. Krepel, Jiri, “Molten Salt Reactors research at PSI”, Presentation at the GIF SSC-MSR meeting, June 2016, Grenoble, France
6. Krepel, Jiri, “Molten Salt Reactor Research in Switzerland”, Presentation at the 23rd GIF SSC-MSR meeting, Jan 2017, Villigen, Switzerland

Organisation of workshops/conferences

1. GIF MSR workshop, organized by PSI, Villigen, Switzerland, January 24, 2017
2. SAMOFAR summer school, July 2-4, 2017, Lecco (Como Lake), Italy