

Publications of the Argonne nuclear engineering group using ATLAS for nuclear fuels and materials R&D at a stand-alone, dedicated irradiation station:

- 1) Ye, B., Sumit Bhattacharya, K. Mo, D. Yun, W. Mohamed, M. Pellin, J. Fortner et al. "Irradiation behavior study of U–Mo/Al dispersion fuel with high energy Xe." *Journal of Nuclear Materials* 464 (2015): 236-244.
- 2) Yun, Di, Yinbin Miao, Ruqing Xu, Zhigang Mei, Kun Mo, Walid Mohamed, Bei Ye, Michael J. Pellin, and Abdellatif M. Yacout. "Characterization of high energy Xe ion irradiation effects in single crystal molybdenum with depth-resolved synchrotron microbeam diffraction." *Journal of Nuclear Materials* 471 (2016): 272-279.
- 3) Mo, Kun, Di Yun, Yinbin Miao, Xiang Liu, Michael Pellin, Jonathan Almer, Jun-Sang Park, James F. Stubbins, Shaofei Zhu, and Abdellatif M. Yacout. "Investigation of high-energy ion-irradiated MA957 using synchrotron radiation under in-situ tension." *Materials* 9, no. 1 (2016): 15.
- 4) Pellin, M. J., Abdellatif M. Yacout, Kun Mo, Jonathan Almer, S. Bhattacharya, Walid Mohamed, D. Seidman et al. "MeV per nucleon ion irradiation of nuclear materials with high energy synchrotron X-ray characterization." *Journal of Nuclear Materials* 471 (2016): 266-271.
- 5) Kutsaev, Sergey V., Brahim Mustapha, Peter N. Ostroumov, Jerry Nolen, Albert Barcikowski, Michael Pellin, and Abdellatif Yacout. "Heavy ion linear accelerator for radiation damage studies of materials." *Review of Scientific Instruments* 88, no. 3 (2017): 033302.
- 6) Ye, B., L. Jamison, Y. Miao, S. Bhattacharya, G. L. Hofman, and A. M. Yacout. "Cross section TEM characterization of high-energy-Xe-irradiated U-Mo." *Journal of Nuclear Materials* 488 (2017): 134-142.
- 7) Miao, Yinbin, Jason Harp, Kun Mo, Shaofei Zhu, Tiankai Yao, Jie Lian, and Abdellatif M. Yacout. "Bubble morphology in U<sub>3</sub>Si<sub>2</sub> implanted by high-energy Xe ions at 300° C." *Journal of Nuclear Materials* 495 (2017): 146-153.
- 8) Miao, Yinbin, Jason Harp, Kun Mo, Yeon Soo Kim, Shaofei Zhu, and Abdellatif M. Yacout. "Microstructure investigations of U<sub>3</sub>Si<sub>2</sub> implanted by high-energy Xe ions at 600°C." *Journal of Nuclear Materials* 503 (2018): 314-322.
- 9) Miao, Yinbin, Kyle A. Gamble, David Andersson, Zhi-Gang Mei, and Abdellatif M. Yacout. "Rate theory scenarios study on fission gas behavior of U<sub>3</sub>Si<sub>2</sub> under LOCA conditions in LWRs." *Nuclear Engineering and Design* 326 (2018): 371-382.
- 10) Miao, Yinbin, Tiankai Yao, Jie Lian, Shaofei Zhu, Sumit Bhattacharya, Aaron Oaks, Abdellatif M. Yacout, and Kun Mo. "Nano-crystallization induced by high-energy heavy ion irradiation in UO<sub>2</sub>." *Scripta Materialia*, (2018): 169-174
- 11) Sunghwan Kim, Yeon Soo Kim, YJ Jeong, K Mo, Y Miao, B Ye, A Oaks, S Bhattacharya, KH Lee, KN Kim, JM Park, AM Yacout, Effectiveness of the metal coating on U–7Mo dispersion fuel in Al during irradiation, *Journal of Nuclear Materials* 529 (2020): 151945.
- 12) Yinbin Miao, Jason Harp, Kun Mo, Zhi-Gang Mei, Ruqing Xu, Shaofei Zhu, Abdellatif M Yacout, Phase decomposition and bubble evolution in Xe implanted U<sub>3</sub>Si<sub>2</sub> at 450°C, *Journal of Nuclear Materials* 518 (2019): 108-116
- 13) Sumit Bhattacharya, Xiang Liu, Yinbin Miao, Kun Mo, Zhi-Gang Mei, Laura Jamison, Walid Mohamed, Aaron Oaks, Ruqing Xu, Shaofei Zhu, James F Stubbins, Abdellatif M Yacout, Interaction between Al and atomic layer deposited (ALD) ZrN under high-energy heavy ion irradiation, *Acta Materialia*, (2019): 788-798