

**List of some publications by the CRP participants  
relevant to the IAEA project "Primary Radiation Damage Cross Sections"  
and published during the CRP period**

1. J.-Ch. Sublet, et al., "Neutron-induced damage simulations: Beyond defect production cross-sections, displacement per atom and iron-based metrics," *European Physical Journal Plus*, 134, 350 (2019) July 2019, [doi.org/10.1140/epjp/i2019-12758-y](https://doi.org/10.1140/epjp/i2019-12758-y)
2. Y. Iwamoto, M. Yoshida, T. Yoshiie et al., Measurement of displacement cross sections of aluminium and copper at 5 K by using 200 MeV protons, *J. Nucl. Mater.* 508 (2018) 195-202.
3. Y. Iwamoto and T. Ogawa, Comparative study of Monte Carlo particle transport code PHITS and nuclear data processing code NJOY for recoil cross section spectra under neutron irradiation, *Nucl. Instrum. Methods B* 396 (2017) 26–33.
4. P.J. Griffin, A. Koning, D. Rochman, "Impact of Nuclear Data Uncertainty in the Modeling of Neutron-Induced Recoil Atom Energy Distributions in Silicon," *IEEE Transactions on Nuclear Science*, Vol. 66, No. 7, pp. 1719-1729, July 2019, doi: [10.1109/TNS.2019.2894730](https://doi.org/10.1109/TNS.2019.2894730)
5. P.J. Griffin, "Uncertainty Characterization of Silicon Damage Metrics," *IEEE Transactions on Nuclear Science*, Vol. 66, No. 1, pp. 327-336, Jan. 2019. doi: [10.1109/TNS.2018.2876058](https://doi.org/10.1109/TNS.2018.2876058)
6. P.J. Griffin, D. Rochman, A. Koning, "Characterization of the energy-dependent uncertainty and correlation in silicon neutron displacement metrics," *EPJ Web of Conferences*, 145, 02008 (2017). <https://doi.org/10.1051/epjconf/201714602008>
7. P.J. Griffin, P.J. Cooper, "Influence of the Damage Partition Function on the Uncertainty of the Silicon Displacement Damage Metric," *IEEE Transactions on Nuclear Science*, Vol. 64, No. 1, pp. 574-581. January 2017. doi: [10.1109/TNS.2016.2608336](https://doi.org/10.1109/TNS.2016.2608336)
8. P.J. Griffin, Detailed Description of the Derivation of the Silicon Damage Response Function, Report [SAND2016-2269](https://www.sandia.gov/publications/2016/03/SAND2016-2269), Sandia National Laboratories, March 2016
9. M.R. Gilbert, J.-Ch. Sublet, PKA distributions, Contributions from transmutation products and from radioactive decay, [Nuclear Materials and Energy 000\(2016\)1](https://www.iaea.org/publications/2016/01/Nuclear_Materials_and_Energy_000(2016)1); [EUROFUSION CP\(15\)10/03](https://www.iaea.org/publications/2015/10/EUROFUSION_CP(15)10/03)
10. A.J. Koning. Bayesian Monte Carlo Method for Nuclear Data Evaluation, [Nucl. Data Sheets 123\(2015\)207](https://www.iaea.org/publications/2015/07/Nucl_Data_Sheets_123(2015)207)
11. M.R. Gilbert, J. Marian, J.-Ch. Sublet, Energy spectra of primary knock-on atoms under neutron irradiation, [Journal of Nuclear Materials 467 \(2015\) 121](https://www.iaea.org/publications/2015/05/Journal_of_Nuclear_Materials_467(2015)121)
12. M.R. Gilbert, J.-Ch. Sublet, Differential dpa calculations with SPECTRA-PKA, [Journal of Nuclear Materials 504\(2018\)101](https://www.iaea.org/publications/2018/01/Journal_of_Nuclear_Materials_504(2018)101)
13. M.R. Gilbert, J.-C. Sublet, PKA distributions of the elements simulated using TENDL- 2015; Magnetic Fusion Plants, [Report CCFE-R\(16\) 36-supplement, Culham, July 2016](https://www.iaea.org/publications/2016/07/Report_CCFE-R(16)_36-supplement_Culham_July_2016).
14. P. Helgesson, H. Sjöstrand, A. Koning, D. Rochman, E. Alhassan, S. Pomp, Incorporating experimental information in the TMC methodology using file weights, [Nuclear Data Sheets, 123 \(2015\) 214](https://www.iaea.org/publications/2015/07/Nuclear_Data_Sheets_123(2015)214)
15. P. Helgesson, H. Sjöstrand, A.J. Koning, J. Rydén, D. Rochman, E. Alhassan, S. Pomp, Including experimental information in TMC using file weights from automatically generated experimental covariance matrices, submitted to *Annals of Nuclear Energy*, 2015
16. P. Helgesson; Approaching well-founded comprehensive nuclear data uncertainties: Fitting imperfect models to imperfect data; Publisher: Acta Universitatis Upsaliensis; ISBN: 978-91-513-0334-5; Ph.D.-thesis
17. P. Helgesson, H. Sjöstrand, and D. Rochman, Uncertainty-driven nuclear data evaluation including thermal ( $n, \alpha$ ) applied to 59 Ni, *Nuclear Data Sheets*, vol. 145, pp. 1–24, Nov. 2017
18. P. Helgesson and H. Sjöstrand, Treating model defects by fitting smoothly varying model parameters: Energy dependence in nuclear data evaluation, *Annals of Nuclear Energy*, vol. 120, pp. 35–47, Oct. 2018, doi: [10.1016/j.anucene.2018.05.026](https://doi.org/10.1016/j.anucene.2018.05.026).
19. C. Konno, S. Sato, M. Ohta, S. Kwon, K. Ochiai, New Remarks on KERMA Factors and DPA Cross Section Data in ACE Files, contributing paper at ISFNT-12, 14-18 Sep 2015, <http://www.isfnt-12.org/>
20. A.Yu.Konobeyev, U.Fischer, Yu.A.Korovin, S.P.Simakov, Evaluation of effective threshold displacement energies
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23. *Nucl. Instr. and Meth. Phys. Res. B*431 (2018) pp. 55-58
24. A.Yu.Konobeyev, U.Fischer, S.P.Simakov, Atomic displacement cross-sections for neutron irradiation of materials from Be to Bi calculated using the arc-dpa model,

25. Nuclear Engineering and Technology, v.51 (2019) pp. 170-175
26. A.Yu. Konobeyev, U. Fischer, Complete gas production data library for nuclides from Mg to Bi at neutron incident energies up to 200 MeV, KIT Scientific Working Paper 36, Sep 2015
27. S. Akça, A.Yu. Konobeyev and U. Fischer, Evaluated gas production cross-section data for natural titanium irradiated with protons at energies up to 3 GeV, Kerntechnik 79(2014)464
28. A.Yu. Konobeyev, U. Fischer, Further improvement of (n,p) and (n, $\alpha$ ) reaction cross-sections calculated using the TALYS code, KIT Scientific Working Paper 35, 2015
29. A.Yu. Konobeyev, U. Fischer, Evaluation of atomic displacement and gas production cross-section for  $^9\text{Be}$  irradiated with neutrons at energies up to 200 MeV, KIT Scientific Working Paper 37, Sep 2015
30. A.Yu. Konobeyev, U. Fischer, P.E. Pereslavl'tsev, Evaluation of advanced displacement cross-sections for the major EUROFER constituents based on an atomistic modelling approach, Kerntechnik 80(2015)1
31. Y. Iwamoto, T. Yoshiie, M. Yoshida et al., Measurement of the displacement cross-section of copper irradiated with 125 MeV protons at 12 K, J. Nucl. Mater. 296 (2015) 369-375
32. M.R. Gilbert, J.-C. Sublet, R.A. Forrest, PKA distributions of the elements simulated using TENDL-2014; Magnetic Fusion Plants, Report CCFE-R(15)26-supplement, Culham, Feb 2015; [available on-line](#)
33. J.-P. Crocombette and T. Jourdan, Cell Molecular Dynamics for Cascades (CMDC): A new tool for cascade simulation, Nuclear Instruments and Methods in Physics Research, B352 (2015) 9-13
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38. K. Nordlund, A.E. Sand, F. Granberg, S.J. Zinkle, R.E. Stoller, R.S. Averback, T. Suzudo, L. Malerba, F. Banhart, W.J. Weber, F. Willaime, S.L. Dudarev and D. Simeone, Primary Radiation Damage in Materials, Review of Current Understanding and Proposed New Standard Displacement Damage Model to Incorporate in Cascade Defect Production Efficiency and Mixing Effects, NEA Report NEA/NSC/DOC(2015)9, Paris, available on-line: <https://www.oecd-nea.org/science/docs/2015/nsc-doc2015-9.pdf>