



Cameron Tracy

Research Scholar

Center for International Security and Cooperation

Bio

ACADEMIC APPOINTMENTS

- Social Science Research Scholar, Center for International Security and Cooperation

Teaching

COURSES

2023-24

- Blueprint to Battlefield: Weapons Technology and Sociotechnical Change: INTLPOL 296 (Aut)
- Interschool Honors Program in International Security Studies: IIS 198 (Spr)
- Interschool Honors Program in International Security Studies: IIS 199 (Aut, Win, Spr)

2022-23

- Blueprint to Battleground: Weapons, Technologies, and Sociotechnical Change: INTLPOL 296 (Aut)
- Interschool Honors Program in International Security Studies: IIS 199 (Aut, Win, Spr)

2021-22

- Interschool Honors Program in International Security Studies: IIS 199 (Aut, Win, Spr)

Publications

PUBLICATIONS

- **Cureton et al. Review of Swift Heavy Ion Irradiation Effects in CeO₂ (vol 5, 19, 2021)** *QUANTUM BEAM SCIENCE*
Cureton, W. F., Tracy, C. L., Lang, M.
2021; 5 (3)
- **Multi-scale investigation of heterogeneous swift heavy ion tracks in stannate pyrochlore** *JOURNAL OF MATERIALS CHEMISTRY A*
O'Quinn, E. C., Tracy, C. L., Cureton, W. F., Sachan, R., Neuefeind, J. C., Trautmann, C., Lang, M. K.
2021
- **Opportunities for US-Russian collaboration on the safe disposal of nuclear waste** *BULLETIN OF THE ATOMIC SCIENTISTS*
Tracy, C. L., Park, S., Plevaka, M., Bogdanova, E.
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- **Disorder in Mn+1AX_n phases at the atomic scale.** *Nature communications*
Wang, C., Yang, T., Tracy, C. L., Lu, C., Zhang, H., Hu, Y., Wang, L., Qi, L., Gu, L., Huang, Q., Zhang, J., Wang, J., Xue, et al
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- **Disorder in $M(n+1)AX(n)$ phases at the atomic scale** *NATURE COMMUNICATIONS*
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- **Measurement of UO_2 surface oxidation using grazing-incidence x-ray diffraction: Implications for nuclear forensics** *JOURNAL OF NUCLEAR MATERIALS*
Tracy, C. L., Chen, C., Park, S., Davisson, M., Ewing, R. C.
2018; 502: 68–75
- **Review of recent experimental results on the behavior of actinide-bearing oxides and related materials in extreme environments** *PROGRESS IN NUCLEAR ENERGY*
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2018; 104: 342–58
- **Radiation-induced disorder in compressed lanthanide zirconates** *PHYSICAL CHEMISTRY CHEMICAL PHYSICS*
Park, S., Tracy, C. L., Zhang, F., Park, C., Trautmann, C., Tkachev, S. N., Lang, M., Mao, W. L., Ewing, R. C.
2018; 20 (9): 6187–97
- **$A(2)TiO(5)$ ($A = Dy, Gd, Er, Yb$) at High Pressure** *INORGANIC CHEMISTRY*
Park, S., Rittman, D. R., Tracy, C. L., Chapman, K. W., Zhang, F., Park, C., Tkachev, S. N., O'Quinn, E., Shamblin, J., Lang, M., Mao, W. L., Ewing, R. C.
2018; 57 (4): 2269–77
- **Initial stages of ion beam-induced phase transformations in Gd_2O_3 and Lu_2O_3** *APPLIED PHYSICS LETTERS*
Chen, C., Tracy, C. L., Wang, C., Lang, M., Ewing, R. C.
2018; 112 (7)
- **Role of the X and n factors in ion-irradiation induced phase transformations of $M(n+1)AX(n)$ phases** *ACTA MATERIALIA*
Wang, C., Yang, T., Tracy, C. L., Xiao, J., Liu, S., Fang, Y., Yan, Z., Ge, W., Xue, J., Zhang, J., Wang, J., Huang, Q., Ewing, et al
2018; 144: 432–46
- **Similar local order in disordered fluorite and aperiodic pyrochlore structures** *ACTA MATERIALIA*
Shamblin, J., Tracy, C. L., Palomares, R. I., O'Quinn, E. C., Ewing, R. C., Neuefeind, J., Feygenson, M., Behrens, J., Trautmann, C., Lang, M.
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- **Swift-heavy ion irradiation response and annealing behavior of $A(2)TiO(5)$ ($A = Nd, Gd, \text{ and } Yb$)** *JOURNAL OF SOLID STATE CHEMISTRY*
Park, S., Tracy, C. L., Zhang, F., Palomares, R. I., Park, C., Trautmann, C., Lang, M., Mao, W. L., Ewing, R. C.
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- **Phase transformation pathways of ultrafast-laser-irradiated $Ln(2)O(3)$ ($Ln = Er-Lu$)** *PHYSICAL REVIEW B*
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- **Lanthanide stannate pyrochlores ($Ln(2)Sn(2)O(7)$; $Ln = Nd, Gd, Er$) at high pressure** *JOURNAL OF PHYSICS-CONDENSED MATTER*
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2017; 29 (50)
- **Lanthanide stannate pyrochlores ($Ln_2Sn_2O_7$; $Ln = Nd, Gd, Er$) at high pressure.** *Journal of physics. Condensed matter : an Institute of Physics journal*
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Turner, K. M., Tracy, C. L., Mao, W. L., Ewing, R. C.
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- **Structure and bulk modulus of Ln -doped UO_2 ($Ln = La, Nd$) at high pressure** *JOURNAL OF NUCLEAR MATERIALS*

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- Rittman, D. R., Park, S., Tracy, C. L., Zhang, L., Palomares, R. I., Lang, M., Navrotsky, A., Mao, W. L., Ewing, R. C.
2017; 490: 28-33
- **Pressure-induced structural modifications of rare-earth hafnate pyrochlore.** *Journal of physics. Condensed matter : an Institute of Physics journal*
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2017; 29 (25): 255401-?
 - **Defect accumulation in swift heavy ion-irradiated CeO₂ and ThO₂** *JOURNAL OF MATERIALS CHEMISTRY A*
Palomares, R. I., Shamblin, J., Tracy, C. L., Neuefeind, J., Ewing, R. C., Trautmann, C., Lang, M.
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Tracy, C. L., Dustin, M. K., Ewing, R. C.
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2015; 93: 1-11
 - **In situ defect annealing of swift heavy ion irradiated CeO₂ and ThO₂ using synchrotron X-ray diffraction and a hydrothermal diamond anvil cell** *JOURNAL OF APPLIED CRYSTALLOGRAPHY*
Palomares, R. I., Tracy, C. L., Zhang, F., Park, C., Popov, D., Trautmann, C., Ewing, R. C., Lang, M.
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 - **Characterization of ion-induced radiation effects in nuclear materials using synchrotron x-ray techniques** *JOURNAL OF MATERIALS RESEARCH*
Lang, M., Tracy, C. L., Palomares, R. I., Zhang, F., Severin, D., Bender, M., Trautmann, C., Park, C., Prakapenka, V. B., Skuratov, V. A., Ewing, R. C.
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- **Ultrafast laser and swift heavy ion irradiation: Response of Gd₂O₃ and ZrO₂ to intense electronic excitation** *APPLIED PHYSICS LETTERS*
Rittman, D. R., Tracy, C. L., Cusick, A. B., Abere, M. J., Torralva, B., Ewing, R. C., Yalisove, S. M.
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- **Redox response of actinide materials to highly ionizing radiation** *NATURE COMMUNICATIONS*
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- **Incorporation of uranium in pyrochlore oxides and pressure-induced phase transitions** *JOURNAL OF SOLID STATE CHEMISTRY*
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- **Swift heavy ion track formation in Gd₂Zr₂-xTi_xO₇ pyrochlore: Effect of electronic energy loss** *NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION B-BEAM INTERACTIONS WITH MATERIALS AND ATOMS*
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Park, S., Lang, M., Tracy, C. L., Zhang, J., Zhang, F., Trautmann, C., Kluth, P., Rodriguez, M. D., Ewing, R. C.
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- **Defect accumulation in ThO₂ irradiated with swift heavy ions** *NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION B-BEAM INTERACTIONS WITH MATERIALS AND ATOMS*
Tracy, C. L., Pray, J. M., Lang, M., Popov, D., Park, C., Trautmann, C., Ewing, R. C.
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- **Swift heavy ion-induced phase transformation in Gd₂O₃** *NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION B-BEAM INTERACTIONS WITH MATERIALS AND ATOMS*
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- **Structural response of A(2)TiO(5) (A = La, Nd, Sm, Gd) to swift heavy ion irradiation** *ACTA MATERIALIA*
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2012; 60 (11): 4477-4486