

River R Robles

Ph.D. Student in Applied Physics, admitted Autumn 2020

Publications

PUBLICATIONS

- **Three-dimensional theory of superradiant free-electron lasers** *PHYSICAL REVIEW RESEARCH*
Robles, R. R., Giannessi, L., Marinelli, A.
2024; 6 (3)
- **Wavelength scaling and multicolor operation of a plasma-driven attosecond x-ray source via harmonic generation** *PHYSICAL REVIEW ACCELERATORS AND BEAMS*
Hessami, R., Morgan, J., Robles, R., Larsen, K. A., Marinelli, A., Emma, C.
2024; 27 (7)
- **Characterization of a HPHT boron ion-implanted diamond X-ray mirror following high vacuum annealing** *DIAMOND AND RELATED MATERIALS*
Margraf-O'Neal, R. A., Ynsa, M. D., Krzywinski, J., Ng, M. L., Macarthur, J. P., Ke, F., Zhong, Y., Mo, S., Pradhan, P., Robles, R., Robert, A., Sato, T., Zhu, et al
2024; 146
- **Terawatt-scale attosecond X-ray pulses from a cascaded superradiant free-electron laser** *NATURE PHOTONICS*
Franz, P., Li, S., Driver, T., Robles, R. R., Cesar, D., Isele, E., Guo, Z., Wang, J., Duris, J. P., Larsen, K., Glowonia, J. M., Cheng, X., Hoffmann, et al
2024
- **Experimental demonstration of attosecond pump-probe spectroscopy with an X-ray free-electron laser** *NATURE PHOTONICS*
Guo, Z., Driver, T., Beauvarlet, S., Cesar, D., Duris, J., Franz, P. L., Alexander, O., Bohler, D., Bostedt, C., Averbukh, V., Cheng, X., Dimauro, L. F., Doumy, et al
2024
- **Fast modeling of regenerative amplifier free-electron lasers** *PHYSICAL REVIEW RESEARCH*
Robles, R. R., Halavanau, A., Marcus, G., Huang, Z.
2023; 5 (4)
- **Low-loss stable storage of 1.2 & ANGS; X-ray pulses in a 14 m Bragg cavity** *NATURE PHOTONICS*
Margraf, R., Robles, R., Halavanau, A., Kryzywinski, J., Li, K., MacArthur, J., Osaka, T., Sakdinawat, A., Sato, T., Sun, Y., Tamasaku, K., Huang, Z., Marcus, et al
2023
- **Reconstruction of x-ray free-electron laser pulse duration and energy chirp from spectral intensity fluctuations** *PHYSICAL REVIEW ACCELERATORS AND BEAMS*
Robles, R. R., Halavanau, A., Cesar, D., Lutman, A., Stupakov, G.
2023; 26 (3)
- **X-ray Free Electron Laser Accelerator Lattice Design Using Laser-Assisted Bunch Compression** *APPLIED SCIENCES-BASEL*
Xu, H., Anisimov, P. M., Carlsten, B. E., Duffy, L. D., Marksteiner, Q. R., Robles, R. R.
2023; 13 (4)
- **Experimental setup for high-resolution characterization of crystal optics for coherent X-ray beam applications.** *Journal of applied crystallography*
Halavanau, A., Margraf, R., Robles, R., MacArthur, J., Qu, Z., Marcus, G., Wu, J., Sato, T., Zhu, D., Takacs, C. J., Arthur, R., Kraynis, O., Johnson, et al
2023; 56 (Pt 1): 155-159
- **Versatile, high brightness, cryogenic photoinjector electron source** *PHYSICAL REVIEW ACCELERATORS AND BEAMS*
Robles, R. R., Camacho, O., Fukasawa, A., Majernik, N., Rosenzweig, J. B.
2021; 24 (6)