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Ph.D. Student in Physics, admitted Autumn 2018

Publications

PUBLICATIONS

- **Stepwise DNA unwinding gates TnpB genome-editing activity.** *bioRxiv : the preprint server for biology*
Zhou, Z., Saffarian-Deemyad, I., Shi, H., Weiss, T., Ur-Rehman, M. M., Vohra, K., Skopintsev, P., Yoon, P. H., Trinidad, M. I., Langeberg, C. J., Kamalu, M., Amerasekera, J., Doherty, et al
2026
- **Rapid two-step target capture ensures efficient CRISPR-Cas9-guided genome editing.** *Molecular cell*
Shi, H., Al-Sayyad, N., Wasko, K. M., Trinidad, M. I., Doherty, E. E., Vohra, K., Boger, R. S., Colognori, D., Cofsky, J. C., Skopintsev, P., Bryant, Z., Doudna, J. A.
2025
- **Dynamic basis of supercoiling-dependent DNA interrogation by Cas12a via R-loop intermediates.** *Nature communications*
Aris, K. D., Cofsky, J. C., Shi, H., Al-Sayyad, N., Ivanov, I. E., Balaji, A., Doudna, J. A., Bryant, Z.
2025; 16 (1): 2939
- **Ancestral RNA-guided TnpB nuclease interrogates DNA in discrete supercoiling-sensitive steps**
Saffarian-Deemyad, I., Zhou, Z., Aris, K., Shi, H., Al-Sayyad, N., Doudna, J. A., Bryant, Z.
CELL PRESS.2025
- **Torque spectroscopy of molecular friction: From basepair stacking to Cas9**
Al-Sayyad, N., Starr, C. H., Ivanov, I. E., Cofsky, J., Aris, K., Shi, H., Doudna, J. A., Bryant, Z.
CELL PRESS.2024: 500A
- **Characterizing dissociative motion in time-resolved x-ray scattering from gas-phase diatomic molecules** *PHYSICAL REVIEW A*
Ware, M. R., Glownia, J. M., Al-Sayyad, N., O'Neal, J. T., Bucksbaum, P. H.
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