



Frederick U Nitta

Ph.D. Student in Electrical Engineering, admitted Autumn 2024

Bio

BIO

Frederick received his B.S. with EE and Chemistry from Stanford (2024), alongside a co-term in MSE (2024) at Stanford. He completed his EE honors thesis with Prof. Krishna Saraswat and Prof. Eric Pop on the efficiency limits of transition metal dichalcogenide (TMD) solar cells, receiving the Firestone Medal for Excellence in Undergraduate Research. He is now pursuing his Ph.D. in EE, on 3R-phase TMDs and their bulk photovoltaic effect, and on the physics and applications of transition metal oxides. He is co-advised by Prof. Eric Pop and Prof. Andrew Mannix.

LINKS

- LinkedIn: <https://www.linkedin.com/in/fredericknitta/>

Publications

PUBLICATIONS

- **Resolving the Electron Plume within a Scanning Electron Microscope.** *ACS nano*
Alcorn, F. M., Perez, C., Smoll, E. J., Hoang, L., Nitta, F. U., Mannix, A. J., Talin, A. A., Nakakura, C. Y., Chandler, D. W., Kumar, S.
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- **Axon-like active signal transmission.** *Nature*
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- **Toward Mass Production of Transition Metal Dichalcogenide Solar Cells: Scalable Growth of Photovoltaic-Grade Multilayer WSe₂ by Tungsten Selenization.** *ACS nano*
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- **Scalable production of photovoltaic-grade WSe₂ via tungsten selenization**
Neilson, K. M., Hamtaei, S., Nazif, K., Carr, J. M., Rahimi, S., Nitta, F., Brammertz, G., Blackburn, J. L., Hadermann, J., Saraswat, K. C., Reid, O. G., Vermang, B., Daus, et al
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- **Efficiency limit of transition metal dichalcogenide solar cells** *COMMUNICATIONS PHYSICS*
Nazif, K., Nitta, F. U., Daus, A., Saraswat, K. C., Pop, E.
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- **Efficiency Limit of Transition Metal Dichalcogenide Solar Cells**
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