Stanford

# Varun Dolia

Ph.D. Student in Materials Science and Engineering, admitted Autumn 2021

## Bio

### BIO

Varun Dolia is a Benchmark Fellow and a Ph.D. candidate in Prof. Jen Dionne's lab. He is excited about developing nanophotonic platforms for health and environmental monitoring.

### EDUCATION AND CERTIFICATIONS

- B.Tech with Honours, Indian Institute of Technology (IIT) Gandhinagar , Materials Science and Engineering (2021)

### LINKS

- LinkedIn: https://www.linkedin.com/in/varun3999/

## Publications

### PUBLICATIONS

- **Very-large-scale integrated high quality factor nanoantenna pixels.** *Nature nanotechnology*
  Dolia, V., Balch, H. B., Dagli, S., Abdollahramezani, S., Carr Delgado, H., Moradifar, P., Chang, K., Stiber, A., Safir, F., Lawrence, M., Hu, J., Dionne, J. A.
  2024

- **Rapid genetic screening with high quality factor metasurfaces.** *Nature communications*
  Hu, J., Safir, F., Chang, K., Dagli, S., Balch, H. B., Abendroth, J. M., Dixon, J., Moradifar, P., Dolia, V., Sahoo, M. K., Pinsky, B. A., Jeffrey, S. S., Lawrence, et al
  2023; 14 (1): 4486

- **Label-free spatial profiling of the melanoma tumor microenvironment using metasurface-enhanced Raman spectroscopy.**
  Chang, K., Serasanambati, M., Naba, F., Bordoloi, P., Georgiadis, A., Wagner, E., Delgado, H., Chen, C., Dolia, V., Ogunlade, B., Dado, R., Stiber, A., Hu, et al
  AMER ASSOC CANCER RESEARCH.2026

- **GHz-Speed Wavefront Shaping Metasurface Modulators Enabled by Resonant Electro-Optic Nanoantennas.** *Advanced materials (Deerfield Beach, Fla.)*
  Dagli, S., Shim, J., Carr Delgado, H., Balch, H. B., Abdollahramezani, S., Chen, C. Y., Dolia, V., Klopfer, E., Dixon, J., Hu, J., Ogunlade, B., Song, J. H., Brongersma, et al
  2025: e06790

- **High-throughput antibody screening with high-quality factor nanophotonics and bioprinting.** *ArXiv*
  Abdollahramezani, S., Omo-Lamai, D., Bosman, G., Hemmatyar, O., Dagli, S., Dolia, V., Chang, K., Güsken, N. A., Delgado, H. C., Boons, G. J., Brongersma, M. L., Safir, F., Khuri-Yakub, et al
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- **Rapid genetic screening with high quality factor metasurfaces.** *ArXiv*

Hu, J., Safir, F., Chang, K., Dagli, S., Balch, H. B., Abendroth, J. M., Dixon, J., Moradifar, P., Dolia, V., Sahoo, M. K., Pinsky, B. A., Jeffrey, S. S., Lawrence, et al

2021

- **Progress, Challenges, and Opportunities in the Synthesis, Characterization, and Application of Metal-Boride-Derived Two-Dimensional Nanostructures** *ACS MATERIALS LETTERS*

  Gunda, H., Klebanoff, L. E., Sharma, P., Varma, A. K., Dolia, V., Jasuja, K., Stavila, V.

  2021; 3 (5): 535-556

- **Dissimilar adsorption of higher-order aggregates compared with monomers and dimers of methylene blue on graphene oxide: An optical spectroscopic perspective** *Carbon Trends*

  Dolia, V., James, A. L., Chakrabarty, S., Jasuja, K.

  2021; 4