



## Ani Baghdasaryan

Physical Science Research Scientist  
Materials Science and Engineering

### Bio

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#### ACADEMIC APPOINTMENTS

- Physical Science Research Scientist, Materials Science and Engineering

#### LINKS

- LinkedIn: <https://www.linkedin.com/in/dr-ani-baghdasaryan-aa418a131/>
- Google Scholar Profile: [https://scholar.google.com/citations?hl=en&user=FKVGmfwAAAAJ&view\\_op=list\\_works&gmla=AJsN-F4OInmFQz2AR0aD0VsKnfJ3HuGGoav-aB-egKsC2Opa-Z6y0KUUlplhXhvVAiOlr-tBO5G6jQnf-Zv6CUThrubXlvJ1A](https://scholar.google.com/citations?hl=en&user=FKVGmfwAAAAJ&view_op=list_works&gmla=AJsN-F4OInmFQz2AR0aD0VsKnfJ3HuGGoav-aB-egKsC2Opa-Z6y0KUUlplhXhvVAiOlr-tBO5G6jQnf-Zv6CUThrubXlvJ1A)
- Research Gate: <https://www.researchgate.net/profile/Ani-Baghdasaryan>

### Publications

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#### PUBLICATIONS

- **Tartrazine clears live cells while preserving viability at high refractive indices and osmolality.** *bioRxiv : the preprint server for biology*  
Hou, X., Cai, S., Cui, H., Liu, Z., Zhao, S., Zhang, L. Y., Baghdasaryan, A., Crunkleton, V., Brongersma, M. L., Hong, G.  
2026
- **In vivo imaging of the immune system** *NATURE REVIEWS BIOENGINEERING*  
Jiang, Y., Ren, T., Zhao, S., Baghdasaryan, A., Zhang, X., Chen, X., Wang, F., Dai, H.  
2026
- **Color-neutral and reversible tissue transparency enables longitudinal deep-tissue imaging in live mice.** *Proceedings of the National Academy of Sciences of the United States of America*  
Keck, C. H., Schmidt, E. L., Roth, R. H., Floyd, B. M., Tsai, A. P., Garcia, H. B., Cui, M., Chen, X., Wang, C., Park, A., Zhao, S., Liao, P. A., Casey, et al  
2025; 122 (35): e2504264122
- **Molecular Gold Nanoclusters for Advanced NIR-II Bioimaging and Therapy.** *Chemical reviews*  
Baghdasaryan, A., Dai, H.  
2025
- **Color-neutral and reversible tissue transparency enables longitudinal deep-tissue imaging in live mice.** *bioRxiv : the preprint server for biology*  
Keck, C. H., Schmidt, E. L., Roth, R. H., Floyd, B. M., Tsai, A. P., Garcia, H. B., Cui, M., Chen, X., Wang, C., Park, A., Zhao, S., Liao, P. A., Casey, et al  
2025
- **A SARS-CoV-2 vaccine on an NIR-II/SWIR emitting nanoparticle platform.** *Science advances*  
Jiang, Y., Sanyal, M., Hussein, N. A., Baghdasaryan, A., Zhang, M., Wang, F., Ren, F., Li, J., Zhu, G., Meng, Y., Adamska, J. Z., Mellins, E., Dai, et al  
2025; 11 (6): eadp5539

- **A human autoimmune organoid model reveals IL-7 function in coeliac disease.** *Nature*  
Santos, A. J., van Unen, V., Lin, Z., Chirieleison, S. M., Ha, N., Batish, A., Chan, J. E., Cedano, J., Zhang, E. T., Mu, Q., Guh-Siesel, A., Tomaske, M., Colburg, et al  
2024
- **Intratumor injected gold molecular clusters for NIR-II imaging and cancer therapy.** *Proceedings of the National Academy of Sciences of the United States of America*  
Baghdasaryan, A., Liu, H., Ren, F., Hsu, R., Jiang, Y., Wang, F., Zhang, M., Grigoryan, L., Dai, H.  
2024; 121 (5): e2318265121
- **Shortwave-infrared-light-emitting probes for the in vivo tracking of cancer vaccines and the elicited immune responses.** *Nature biomedical engineering*  
Ren, F., Wang, F., Baghdasaryan, A., Li, Y., Liu, H., Hsu, R., Wang, C., Li, J., Zhong, Y., Salazar, F., Xu, C., Jiang, Y., Ma, et al  
2023
- **Phosphorylcholine-conjugated gold-molecular clusters improve signal for Lymph Node NIR-II fluorescence imaging in preclinical cancer models.** *Nature communications*  
Baghdasaryan, A., Wang, F., Ren, F., Ma, Z., Li, J., Zhou, X., Grigoryan, L., Xu, C., Dai, H.  
2022; 13 (1): 5613
- **In vivo non-invasive confocal fluorescence imaging beyond 1,700 nm using superconducting nanowire single-photon detectors.** *Nature nanotechnology*  
Wang, F., Ren, F., Ma, Z., Qu, L., Gourgues, R., Xu, C., Baghdasaryan, A., Li, J., Zadeh, I. E., Los, J. W., Fognini, A., Qin-Dregely, J., Dai, et al  
2022
- **Molecule-like and lattice vibrations in metal clusters** *PHYSICAL CHEMISTRY CHEMICAL PHYSICS*  
Ramankutty, K., Yang, H., Baghdasaryan, A., Teyssier, J., Nicu, V., Burgi, T.  
2022; 24 (22): 13848-13859
- **High-precision tumor resection down to few-cell level guided by NIR-IIb molecular fluorescence imaging.** *Proceedings of the National Academy of Sciences of the United States of America*  
Wang, F., Qu, L., Ren, F., Baghdasaryan, A., Jiang, Y., Hsu, R., Liang, P., Li, J., Zhu, G., Ma, Z., Dai, H.  
2022; 119 (15): e2123111119
- **Thiolato Protected Copper Sulfide Cluster with the Tentative Composition Cu<sub>74</sub>S<sub>15</sub>(2-PET)<sub>45</sub>** *INORGANIC CHEMISTRY*  
Baghdasaryan, A., Besnard, C., Daku, L., Delgado, T., Burgi, T.  
2020; 59 (4): 2200-2208