

Stanford



Benjamin Ofori Okai

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Bio

INSTITUTE AFFILIATIONS

- Member, Stanford PULSE Institute

EDUCATION AND CERTIFICATIONS

- PhD, Massachusetts Institute of Technology , Physical Chemistry (2016)
- S.M., Massachusetts Institute of Technology , Physical Chemistry (2013)
- B.Sc. (Int), Yale University , Chemistry (2009)

Publications

PUBLICATIONS

- **Ultrafast multi-cycle terahertz measurements of the electrical conductivity in strongly excited solids.** *Nature communications*
Chen, Z., Curry, C. B., Zhang, R., Treffert, F., Stojanovic, N., Toleikis, S., Pan, R., Gauthier, M., Zapolnova, E., Seipp, L. E., Weinmann, A., Mo, M. Z., Kim, et al
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- **Dynamics of a Persistent Insulator-to-Metal Transition in Strained Manganite Films** *PHYSICAL REVIEW LETTERS*
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- **Toward quasi-DC conductivity of warm dense matter measured by single-shot terahertz spectroscopy**
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- **A terahertz pump mega-electron-volt ultrafast electron diffraction probe apparatus at the SLAC Accelerator Structure Test Area facility** *JOURNAL OF INSTRUMENTATION*
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- **THz generation using a reflective stair-step echelon** *OPTICS EXPRESS*
Ofori-Okai, B. K., Sivarajah, P., Huang, W., Nelson, K. A.
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- **Ambient-temperature liquid jet targets for high-repetition-rate HED discovery science** *PHYSICS OF PLASMAS*
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- **Diamond formation kinetics in shock-compressed C#H#O samples recorded by small-angle x-ray scattering and x-ray diffraction.** *Science advances*
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2022; 8 (35): eab0617
- **Towards performing high-resolution inelastic X-ray scattering measurements at hard X-ray free-electron lasers coupled with energetic laser drivers** *JOURNAL OF SYNCHROTRON RADIATION*
Descamps, A., Ofori-Okai, B. K., Baldwin, J. K., Chen, Z., Fletcher, L. B., Glenzer, S. H., Hartley, N. J., Hasting, J. B., Khaghani, D., Mo, M., Nagler, B., Recoules, Redmer, R., et al
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- **Investigation of hard x-ray emissions from terawatt laser-irradiated foils at the Matter in Extreme Conditions instrument of the Linac Coherent Light Source** *JOURNAL OF INSTRUMENTATION*
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- **Ultrafast visualization of incipient plasticity in dynamically compressed matter.** *Nature communications*
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Chen, Z., Na, X., Curry, C. B., Liang, S., French, M., Descamps, A., DePonte, D. P., Koralek, J. D., Kim, J. B., Lebovitz, S., Nakatsutsumi, M., Ofori-Okai, B. K., Redmer, et al
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- **High-resolution inelastic x-ray scattering at the high energy density scientific instrument at the European X-Ray Free-Electron Laser (vol 92, 013101, 2021) REVIEW OF SCIENTIFIC INSTRUMENTS**
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Minami, Y., Ofori-Okai, B., Sivarajah, P., Katayama, I., Takeda, J., Nelson, K. A., Suemoto, T.
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Snively, E. C., Othman, M. K., Kozina, M., Ofori-Okai, B. K., Weathersby, S. P., Park, S., Shen, X., Wang, X. J., Hoffmann, M. C., Li, R. K., Nanni, E. A.
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- **Analysis of terahertz generation by beamlet superposition** *OPTICS EXPRESS*
Ravi, K., Ofori-Okai, B. K., Nelson, K. A., Kaertner, F. X.
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- **Dynamical Slowing-Down in an Ultrafast Photoinduced Phase Transition.** *Physical review letters*
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Li, R. K., Hoffmann, M. C., Nanni, E. A., Glenzer, S. H., Kozina, M. E., Lindenberg, A. M., Ofori-Okai, B. K., Reid, A. H., Shen, X., Weathersby, S. P., Yang, J., Zajac, M., Wang, et al
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- **THz-Pump UED-Probe on a Topological Weyl Semimetal**

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- **Setup for meV-resolution inelastic X-ray scattering measurements and X-ray diffraction at the Matter in Extreme Conditions endstation at the Linac Coherent Light Source**

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- **Two-Dimensional Spectroscopy at Terahertz Frequencies** *TOPICS IN CURRENT CHEMISTRY*

Lu, J., Li, X., Zhang, Y., Hwang, H. Y., Ofori-Okai, B. K., Nelson, K. A.
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- **Modeling of THz Pump Induced Plasmonic Oscillations in Silicon Membranes**

Wang, N., Nanni, E. A., Shen, X., Li, R. K., Hoffmann, M., Ofori-Okai, B. K., Zheng, Q., Yang, J., Wang, X. J., IEEE
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- **Rapid and precise determination of zero-field splittings by terahertz time-domain electron paramagnetic resonance spectroscopy** *CHEMICAL SCIENCE*

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- **Transient terahertz photoconductivity measurements of minority-carrier lifetime in tin sulfide thin films: Advanced metrology for an early stage photovoltaic material** (**vol 119, 035101, 2016**) *JOURNAL OF APPLIED PHYSICS*
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- **Circumventing Limitations of Tilted-pulse-front Terahertz Generation Using a Stair-step Echelon**
Ravi, K., Ofori-Okai, B. K., Sivarajah, P., Huang, W., Kartner, F. X., Nelson, K. A., IEEE
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- **Visualization of guided and leaky wave behaviors in an indium tin oxide metallic slab waveguide** *OPTICS EXPRESS*
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- **Invited Article: Single-shot THz detection techniques optimized for multidimensional THz spectroscopy** *REVIEW OF SCIENTIFIC INSTRUMENTS*
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- **The homogenization limit and waveguide gradient index devices demonstrated through direct visualization of THz fields** *NEW JOURNAL OF PHYSICS*
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- **Direct experimental visualization of waves and band structure in 2D photonic crystal slabs** *NEW JOURNAL OF PHYSICS*
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• **Spin properties of very shallow nitrogen vacancy defects in diamond *PHYSICAL REVIEW B***

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