

Stanford



Yonatan Israel

Postdoctoral Research Fellow, Physics

Bio

PROFESSIONAL EDUCATION

- Doctor of Philosophy, Weizmann Institute Of Science (2017)
- Master of Science, Weizmann Institute Of Science (2012)
- Bachelor of Science, Bar-Ilan University (2009)

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

1. Quantum optics of free electrons and light: generation and control of quantum states, quantum measurements and metrology.
2. Optical and electron microscopy: super-resolution, phase microscopy, holography, biological imaging, and quantum enhanced microscopy.

LAB AFFILIATIONS

- Mark Kasevich (11/1/2017)

Publications

PUBLICATIONS

- **High-extinction electron pulses by laser-triggered emission from a Schottky emitter** *APPLIED PHYSICS LETTERS*
Israel, Y., Bowman, A. J., Klopfer, B. B., Koppell, S. A., Kasevich, M. A.
2020; 117 (19)
- **Design for a 10keV multi-pass transmission electron microscope.** *Ultramicroscopy*
Koppell, S. A., Mankos, M., Bowman, A. J., Israel, Y., Juffmann, T., Klopfer, B. B., Kasevich, M. A.
2019; 207: 112834
- **Entangled coherent states created by mixing squeezed vacuum and coherent light** *OPTICA*
Israel, Y., Cohen, L., Song, X., Joo, J., Eisenberg, H. S., Silberberg, Y.
2019; 6 (6): 753–57
- **Super-resolution enhancement by quantum image scanning microscopy** *NATURE PHOTONICS*
Tenne, R., Rossman, U., Rephael, B., Israel, Y., Krupinski-Ptaszek, A., Lapkiewicz, R., Silberberg, Y., Oron, D.
2019; 13 (2): 116–+
- **Quantum image scanning microscopy: concept and considerations towards applicability**
Tenne, R., Rossman, U., Rephael, B., Israel, Y., Krupinski-Ptaszek, A., Lapkiewicz, R., Silberberg, Y., Oron, D., Shahriar, S. M., Scheuer, J.
SPIE-INT SOC OPTICAL ENGINEERING.2019
- **Quantum correlation enhanced super-resolution localization microscopy enabled by a fibre bundle camera** *NATURE COMMUNICATIONS*

Israel, Y., Tenne, R., Oron, D., Silberberg, Y.

2017; 8

- **Quantum enhanced phase retrieval** *OPTICA*

Lieberman, L., Israel, Y., Poem, E., Silberberg, Y.

2016; 3 (2): 193-199

- **Broadband photon pair generation at $3\omega/2$** *APPLIED PHYSICS B-LASERS AND OPTICS*

Suchowski, H., Bruner, B. D., Israel, Y., Ganany-Padowicz, A., Arie, A., Silberberg, Y.

2016; 122 (2)

- **Supersensitive Polarization Microscopy Using NOON States of Light** *PHYSICAL REVIEW LETTERS*

Israel, Y., Rosen, S., Silberberg, Y.

2014; 112 (10)

- **Sub-Rayleigh Lithography Using High Flux Loss-Resistant Entangled States of Light** *PHYSICAL REVIEW LETTERS*

Rosen, S., Afek, I., Israel, Y., Ambar, O., Silberberg, Y.

2012; 109 (10)

- **Experimental tomography of NOON states with large photon numbers** *PHYSICAL REVIEW A*

Israel, Y., Afek, I., Rosen, S., Ambar, O., Silberberg, Y.

2012; 85 (2)

- **Transient Anomalous Diffusion of Telomeres in the Nucleus of Mammalian Cells** *PHYSICAL REVIEW LETTERS*

Bronstein, I., Israel, Y., Kepten, E., Mai, S., Shav-Tal, Y., Barkai, E., Garini, Y.

2009; 103 (1)