

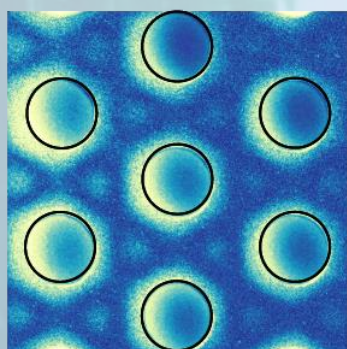
# Looking for excellent students and postdocs

for experimental and theoretical research of the quantum interactions of relativistic electrons, ultrafast laser pulses, and nanophotonic materials

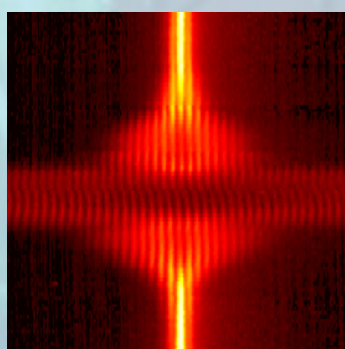
## Do you have?

- Experience with femtosecond lasers or [TEM](#)
- Hands-on approach and enthusiasm for a new cutting-edge experimental setup
- Interest in solving challenging problems (in physics, electrical engineering, math, or material science)
- Excellent analytical skills ([check out our puzzles page](#))

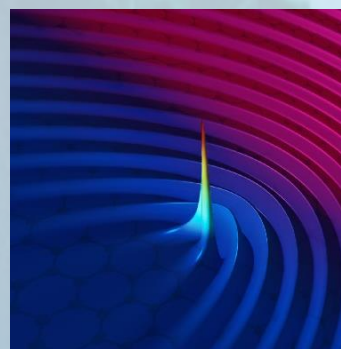
## Selected Results:



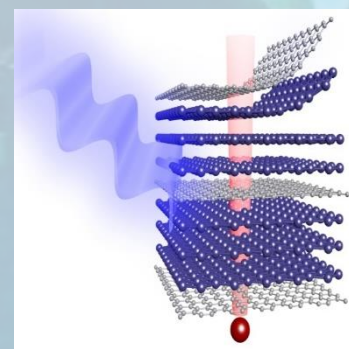
Ultrafast imaging of single photons on the nanoscale



Inverse Cherenkov in strong-field QED



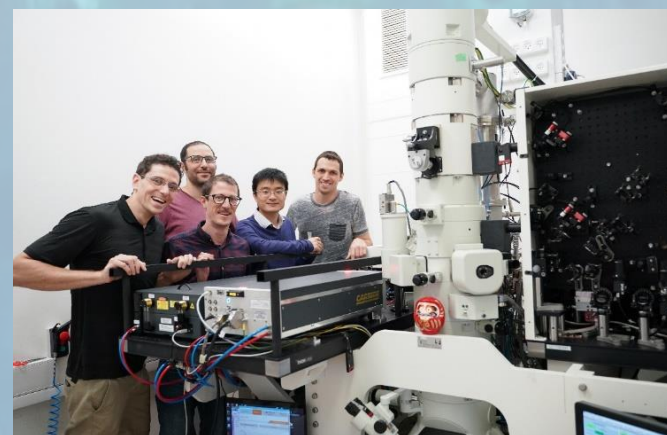
Graphene-based x-ray generation



Light-matter interaction with 2D materials

## Research highlights:

- Plasmons for compact x-ray sources [[Nat. Photonics](#)]
- Enabling forbidden electronic transitions [[Science](#)]
- Shockwaves of light in graphene [[Nat. Comm.](#)]
- Entangled photons by Casimir force [accepted [Nat. Phys.](#)]
- Photonic crystal particle detectors [[Nat. Phys.](#)]
- Self-accelerating quantum particles [[Nat. Phys.](#)]
- QED with vortex electrons [[Phys. Rev. X](#)]



Our 4D electron microscope (one of just a few in the world) with *nm* spatial resolution & *fs* temporal resolution

For top candidates: compete for **excellence fellowships** through Technion's excellence programs in *Nano* or *Quantum*

