

Subject: Abstract

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### Schrödinger's Rainbow: The Renaissance in Quantum Optical Interferometry

I will give a historical of the foundations of quantum mechanics, leading up to the discovery of bright sources of entangled photons utilizing the process of spontaneous parametric downconversion. I will discuss how such a source of photons has revolutionized quantum optics bringing a renaissance in quantum optical interferometry. I will discuss applications to quantum imaging, quantum metrology, and quantum sensing.