

# CERTIFICATE

PROUDLY PRESENTED TO



**Abdullah Hamza**

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***Photonics Spectra Conference 2023***

**Jan. 12, 2023**

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Date of Completion

**Jan. 9 - 12, 2023**

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Event Dates

**Organizer:** Laurin Publishing Co. | Photonics Media, 100 West Street, PO Box 4949, Pittsfield, MA 01202, USA, [www.photonics.com](http://www.photonics.com)

# Presentations Attended

## ***Photonics Spectra Conference 2023***

**Innovations in Ultrashort-Pulse and RF-Excited CO<sub>2</sub> Lasers Expand Materials Processing Applications**

**The New Developments That Quantum Computing Is Driving in Fiber Lasers and Frequency Conversion**

**Present and Future Technologies for Laser Scan Systems**

**Simulating Metamaterials with COMSOL Multiphysics®**

**Assessment of Image Quality for Visual Systems**

**Ultrahigh-Precision Optical Surfaces: Fabrication Examples, Challenges, and Recent Approaches**

**Nanostructured, Ultrabroadband Antireflective Coatings for Glass and Polymers**

**Laser Measurement Accuracy: Why, When, and How**