

# CERTIFICATE

PROUDLY PRESENTED TO



**Abdullah Hamza**

---

***Photonics Spectra Spectroscopy Conference 2023***

**Apr. 19, 2023**

---

Date of Completion

**Apr. 18 - 19, 2023**

---

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 Spectroscopy Conference 2023***

---

**Exploring Plasmonics and Metamaterials with COMSOL®**

---

**Tunable Lenses Magnify Possibilities of Spectroscopy Applications**

---

**Overcoming Detection Limits of Absorption Spectroscopy**

---

**Foundational Principles of Diffraction Gratings**

---

**What's the Matter? Distributed Bragg Reflector (DBR) Laser Diodes Enable the Study of Matter**

---