Training for Optical Diffractive Neural Network Chips

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With the rapid development and widespread application of artificial intelligence technology, the integration of optical computing and photonic integration technology with AI holds the promise of solving problems that traditional electronic computing cannot address, leading to disruptive and transformative technologies and applications. In this talk, we will introduce the training of reconfigurable photonic neural network chips, emphasizing the "black-box" physical training model and its application in reconfigurable on-chip diffraction neural networks. It further develops typical applications in the field of artificial intelligence, fully leveraging the photonic characteristic of "propagation-as-computation."

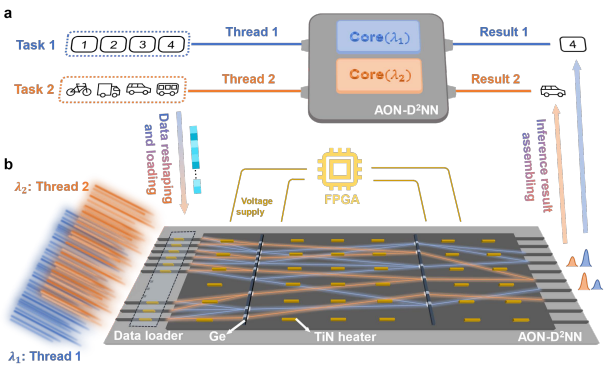

Figure 1: The conceptual diagram and the structural schematic of the training of optical diffractive neural network chip