JOANNEUM RESEARCH MATERIALS

Photonic Chips for the Future of Quantum and Optical Technologies

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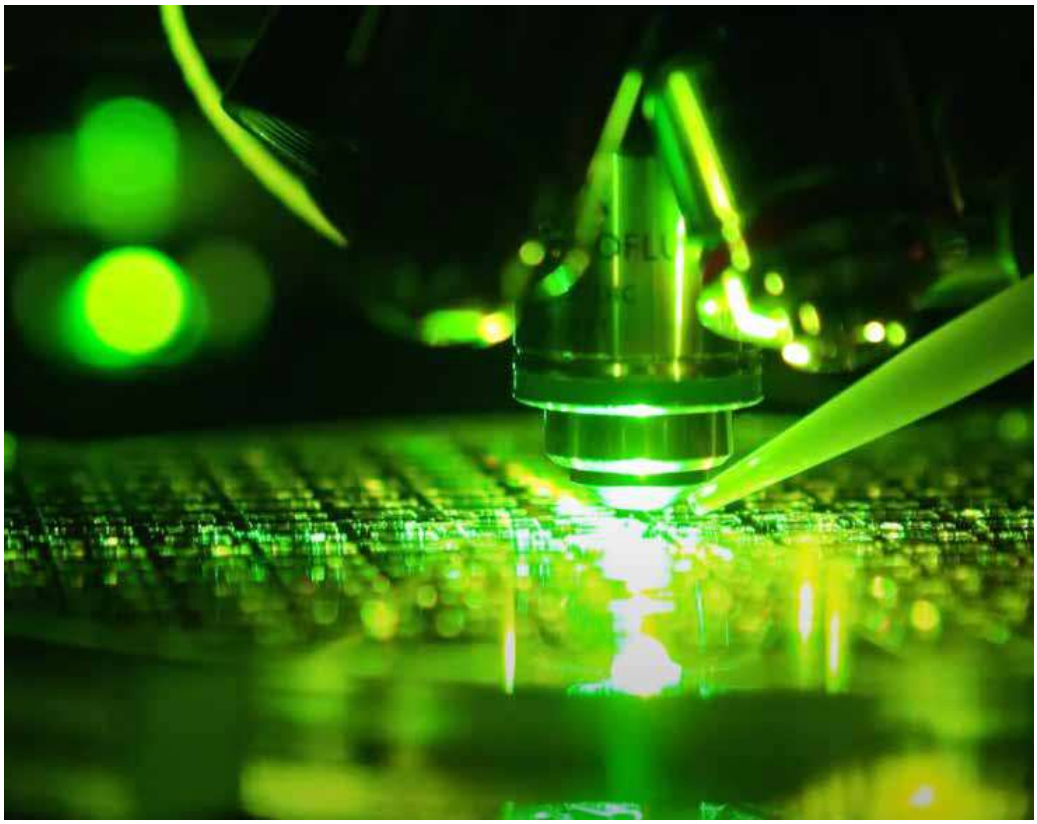
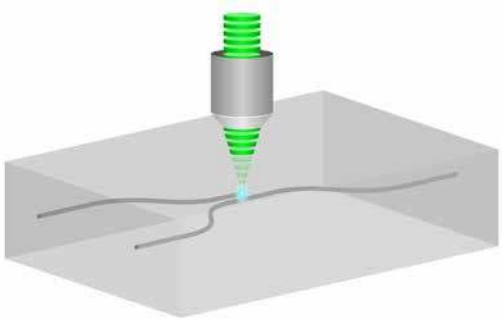


We create **integrated optical circuits** – written directly into glass using ultrashort laser pulses. These compact photonic chips guide and control light with high precision and are key to next-generation applications in:

- **Quantum computing** – process information using photons as qubits
- **Optical sensing** – detect temperature, pressure, or strain with extreme sensitivity
- **Signal processing** – fast, reconfigurable light-based circuits



Our building blocks include **reconfigurable Mach-Zehnder interferometers** with **tunable phase control**, enabling flexible, programmable photonic systems—on a chip the size of a credit card.

Wavetailor

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FFG Promoting Innovation.

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