Efficient High Power Coherent Light Energy Source on Chip Realized via Nanophotonic Waveguide with Curved Reflectors

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**DESIGN**
- Coherent high efficiency High Power Laser using Nano-waveguide with Curved Reflectors
- Integration of Curved Reflectors and broad gain region
- Unit device is cascaded in series to provide high power throughput

**FABRICATION**
- Device was fabricated on InP platform with active layer consisted of multiple InGaAsP QWs
- Processes include: Ebeam lithography, Photo lithography, RIE, ICP, RTP, PECVD, etc
- Six masks were used in total to enable such active devices

**TEST**
- Testing was conducted via coupling infrared light (1.55um) to/from the chip through lenses
- Voltage was applied onto the devices through probes connected with current source
- Higher (~x5) output power is observed compared to MMI-SOA