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Researchers Demonstrate High-Power, Aluminum-Free Mid-IR Laser

Scientists at **Northwestern University's** Center for Quantum Devices in Evanston, Ill., have demonstrated an aluminum-free diode laser that emits up to 3 W at 3.2 μm . In comparison, similar aluminum-free diode lasers have a maximum output of 100 mW, according to the center's director, Manijeh Razeghi. The laser's far field is 12° compared with 60° or 70° for typical diode lasers, she said. This translates to a brighter, more focused beam. The diode laser could find its way into numerous applications, including gas and remote sensing, chemical weapons and telecommunications. Research on the laser, which was funded by the **Defense Advanced Research Projects Agency**, has attracted several companies interested in licensing the technology.