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Recent Progress in Laser Crystals and Ceramics for Femtosecond Mode- Locked Lasers at ˜2 µm

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We report on the recent progress in solid-state lasers emitting ultrashort pulses around 2 µm based on broadband-emitting gain media: disordered crystals (garnets and aluminates) and "mixed" transparent ceramics (sesquioxides) doped with Tm3+ and Tm3+/Ho3+ ions. The role of multiphonon-assisted long-wave emissions in reaching sub-50 fs pulse durations is discussed.

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