

Title	Dispersion management in femtosecond laser oscillators with highly dispersive mirrors
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Abstract	<p>Recently the manufacture of highly dispersive mirrors with -1300 fs^2 group delay dispersion per reflection was reported. Here we demonstrate the intracavity applicability of these novel mirrors in Ti:sapphire oscillators for the first time, as well as their capability of compensating a substantial amount of material dispersion in the cavity (40mm fused silica). We also studied the influence of net negative cavity dispersion, realized with these mirrors, on the achievable maximum pulse energy in long-cavity femtosecond oscillators before the onset of anomalous behaviour (e.g. multi-pulsing). In addition, we demonstrate a 0.5 GHz Ti:sapphire oscillator the dispersion compensation of which is realized with a single highly dispersive mirror.</p>
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