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In 1966, De Maria and co-workers produced the first ultrashort pulses using a passively mode-locked Nd:glass laser. Over the past 50 years, this field has been booming, and ultrafast optics is attracting more and more researchers' attention. In order to obtain ultrafast laser, mode-locking technology is generally needed. Here, researchers from Harbin Engineering University have discovered a new mode-locked device, namely ultra-long-period fiber grating, and realized the multi-wavelength ultrafast laser in the laboratory, which brings new vitality to the development of ultrafast optics.

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The color images are shown online.