Diode laser systems based on nonlinear frequency conversion

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In this chapter, we will give a short introduction to nonlinear frequency conversion with second-order nonlinear optics to provide the basic background to the topic and highlight the important parameters to consider when designing a light source based on frequency conversion. In the following section, the different commonly used implementations of nonlinear frequency conversion will be introduced and some examples of demonstrated laser sources will be given. Finally, we will provide an outlook for the development of frequency converted diode laser light sources and briefly discuss some of the applications.

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