Record Nr. UNINA9910299934703321 Autore Poprawe Reinhart Titolo Tailored Light 1: High Power Lasers for Production / / by Reinhart Poprawe, Konstantin Boucke, Dieter Hoffman Pubbl/distr/stampa Berlin, Heidelberg:,: Springer Berlin Heidelberg:,: Imprint: Springer, , 2018 **ISBN** 3-642-01234-5 Edizione [1st ed. 2018.] Descrizione fisica 1 online resource (268 pages) Collana RWTHedition, , 1865-0899 Disciplina 621.366 Soggetti Manufactures Materials science Microwaves Optical engineering Manufacturing, Machines, Tools, Processes Characterization and Evaluation of Materials Microwaves, RF and Optical Engineering Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto Laser Technology -- Introduction -- Electro-magnetic radiation --Propagation of electro-magnetic waves -- Laser beams -- Optical resonators -- Absorption and emission of radiation -- Generation of laser beams -- Laser media and laser systems. The Laser world consists basically of two areas, which are necessary Sommario/riassunto and in many cases also sufficient for effective innovation: The right laser for the right application. For the individual application that means the determination of optimized process parameters in terms of laser power, peak power/ intensity, focus geometry and dimension, pulse length, pulse repetition rate and wavelength to name only the six most important ones. Once these parameters are identified, the corresponding Laser has to be selected on the basis of commercial availability. Obviously there is no such thing than "One Laser for all". The situation is rather comparable with electrical power, were depending on the demand of the application in terms of voltage,

current and time corresponding power supplies need to be tailored,

however, with the difference that in the case of the Laser the variety of parameters is even higher, thus the technology is more complex but on the other hand much more fl exible in terms optimizing the source to the application. As a consequence it is suggested to generate two volumes on Lasers and Applications named "Tailored Light".