

Title (en)  
SOLID STATE UV LASER

Title (de)  
UV-FESTKÖRPERLASER

Title (fr)  
LASER UV SOLIDE

Publication  
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Application  
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Abstract (en)  
[origin: WO9904317A1] The present invention provides a method and apparatus (10) for ablating material, the method including (a) directing a laser beam (14) through a frequency doubling compound (16); (b) then directing the beam through plurality of frequency converting compounds (20, 24); (c) then directing the beam through a beam separating system (30); and (d) directing the beam or a portion of the beam onto an area of the material to ablate the material, wherein the frequency converting compounds include a CLBO crystal. The apparatus includes a laser source (12) for providing a laser beam (14) of infra-red light, first frequency doubling means (20) for doubling the frequency of the infra-red beam, beam conversion means (24) for converting the infra-red beam into an ultra-violet beam (including a second frequency doubling means for redoubling the frequency to produce a twice doubled frequency beam and a fifth harmonic frequency mixing means for mixing the twice frequency doubled beam with the infra-red beam to produce an ultra-violet fifth harmonic of the infra-red beam to produce an ultra-violet fifth harmonic of the infra-red beam), a beam separating system (30) for separating the ultra-violet harmonic, and a laser delivery system (32) for delivering the ultra-violet harmonic to the material, wherein the apparatus is arranged to direct the infra-red beam (14) through the first frequency doubling means (20) and the beam conversion means (24), and to direct light from the beam conversion means (24) to the beam separating system (30) and then to laser delivery system (32) and the fifth harmonic frequency mixing means or the second frequency doubling means (24) includes a CLBO crystal.

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