

Krupke authored or co-authored US patents

	Patent No.	Issue Date	Author(s)	Title
1	4,004,250	1/18/1977	W. F. Krupke	Laser Action by Optically Depumping Lower States
2	4,053,852	10/11/1977	W. F. Krupke	Near 16 Micron CO ₂ Laser System
3	4,053,851	10/11/1977	W. F. Krupke	Method and Apparatus for Generating Coherent Near 14 and 16 Micron Radiation
4	4,087,763	5/2/1978	E. V. George, W. F. Krupke, J. R. Murray, H. T. Powell, C. Swingle, C. E. Turner, C. K. Rhodes	Method and Apparatus for Secondary Laser Pumping by Electron Beam Excitation
5	4,205,278	5/27/1980	E. V. George, R. A. Haas, W. F. Krupke, L. G. Schlitt	Multiple Excitation Regenerative Amplifier Inertial Confinement System
6	4,233,570	11/11/1980	J. L. Emmett, R. R. Jacobs, W. F. Krupke, M. J. Weber	Tunable, Rare Earth Doped Solid State Lasers
7	4,811,349	3/7/1989	S. A. Payne, L. L. Chase, H. W. Newkirk, W. F. Krupke	Cr ³⁺ Doped Colquiriite Solid State Laser Material
8	5,105,434	4/14/1992	W. F. Krupke, S. A. Payne,	AlGaAs Diode Pumped Tunable Chromium Lasers
9	5,260,954	11/9/1993	C. B. Dane, E. V. George, J. L. Miller, W. F. Krupke	Pulse Compression and Prepulse Suppression Apparatus
10	5,341,389	8/23/1994	S. A. Payne, W. L. Kway, L. D. DeLoach, W. F. Krupke, B. H. T. Chai	Ytterbium and Neodymium Doped Vanadate Laser Host Crystals Having the Apatite Crystal Structure
11	5,517,516	5/14/1996	C. D. Marshall, S. A. Payne, W. F. Krupke	Optically Pumped Cerium Doped LiSrAlF ₆ and LiCaAlF ₆
12	5,526,372	6/11/1996	G. Albrecht, E. V. George, W. F. Krupke, W. R. Sooy, S. B. Sutton	High Energy Bursts from a Solid State Laser Operated in the Heat Capacity Limited Regime
13	5,541,948	7/30/1996	W. F. Krupke, R. H. Page, L. D. DeLoach, S. A. Payne	Transition Metal Doped Sulfide, Selenide, and Telluride Laser Crystal and Lasers
14	5,694,500	12/2/1997	R. H. Page, K. I. Schaffers, S. A. Payne, W. F. Krupke, R. J. Beach	Optical Amplifier Operating at 1.3 Microns Useful for Telecommunications and Based on Dysprosium Doped Metal Chloride Host Materials
15	6,047,013	4/4/2000	S. A. Payne, R. H. Page, K. I. Schaffers, M. C. Nostrand, W. F. Krupke, P.G. Schungemann	Low Phonon Frequency Chalcogenide Crystalline Hosts for Rare Earth Lasers Operating Beyond Three Microns
16	6,212,215	4/3/2001	S. A. Payne, C. D. Marshall, H. T. Powell, W. F. Krupke	Hybrid Solid State Laser System Using a Neodymium Based Master Oscillator and an Yttrium Based Power Amplifier
17	6,304,584	10/16/2001	W. F. Krupke, S. A. Payne, C. D. Marshall	Blue Diode Pumped Solid State Laser Based on Ytterbium Doped Laser Crystals Operating on the Resonance Zero Phonon Transition
18	6,347,109	2/12/2002	R. J. Beach, E. C. Honea, C. Bibeau, H. T. Powell, W. F. Krupke, S. B. Sutton	High Average Power Scalable Thin Disk Laser
19	6,643,311	11/4/2003	W. F. Krupke	Diode Pump Alkali Laser
20	6,693,942	2/17/2004	W. F. Krupke	Diode Pumped Visible Wavelength Alkali Laser
21	7,061,958	6/13/2006	W. F. Krupke	Diode Pumped Alkali Lasers (DPALs) and Amplifiers (DPAAs) with Reduced Buffer Gas Pressures
22	7,061,960	6/13/2006	W. F. Krupke	Diode Pumped alkali Amplifier
23	7,145,931	12/5/2006	W. F. Krupke	Diode Pumped Alkali Molecular Lasers and Amplifiers
24	7,283,576	10/16/2007	W. F. Krupke	Optically Pumped DUV Atomic Vapor Lasers
25	7,286,575	10/23/2007	S. A. Payne, R. J. Beach, J. W. Dawson, W. F. Krupke	Diode Pumped Alkali Vapor Fiber Laser