

*List of publications*

U.S. Patents

C. D. Brooks and F. Di Teodoro:

- “Endcaps for hollow-core optical fibers and method”  
**Patent No. US 8,854,728, issued October 7, 2014**
- “Monolithic pump block for optical amplifiers and associated method”  
**Patent No. US 7,941,019, issued May 10, 2011**
- “Photonic-crystal-rod optical amplifier with sealed-hole endcap and associated method”  
**Patent No. US 7,835,068, issued November 16, 2010**
- “Multi-stage optical amplifier having photonic-crystal-rod waveguides and non-photonic-crystal optical fiber interconnects and associated method”  
**Patent No. US 7,782,527, issued August 24, 2010**

F. Di Teodoro, T. W. Vatter, C.D. Brooks, R.W. Royse, and M.P. Savage-Leuchs:

- “Method and apparatus for high-power, pulsed ring fiber oscillator”  
**Patent No. US 8,750,339, issued June 10, 2014**
- “High-power, pulsed ring fiber oscillator and method”  
**Patent No. US 7,876,803, issued January 25, 2011**

A. Liu, E. C. Honea, C. A. Lemaire, R. D. Mead, C. D. Brooks, A. J. W. Brown, C. E. Hamilton, T. H. Loftus, and F. Di Teodoro:

- “Spectral beam combination of laser beams”  
**Patent No. US 8,472,763, issued June 25, 2013**

F. Di Teodoro and C. D. Brooks:

- “Fiber- or rod-based optical source featuring a large-core, rare-earth-doped photonic-crystal device for generation of narrow-bandwidth high-power pulsed radiation and associated method”  
**Patent No. US 7,830,596, issued November 9, 2010**
- “Method and apparatus for ultra-violet-wavelength laser-induced fluorescence (UV-LIF) using optical output from a photonic-crystal rod”  
**Patent No. US 7,751,118, issued July 6, 2010**
- “Multi-stage optical amplifier having photonic-crystal waveguides for generation of high-power pulsed radiation and associated method”  
**Patent No. US 7,440,175, issued October 21, 2008**
- “Chirped-pulse amplifier using photonic-crystal-rod (PCR) waveguides and associated method”  
**Patent No. US 7,436,585, issued October 14, 2008**
- “Fiber- or rod-based optical source featuring a large-core, rare-earth-doped photonic-crystal device for generation of high-power pulsed radiation and method”  
**Patent No. US 7,391,561, issued June 24, 2008**

- “Method and apparatus for spectral-beam combining of megawatt-peak-power beams from photonic-crystal rods”  
**Patent No. US 7,386,211, issued June 10, 2008**
- “Optical hollow-core delivery fiber and hollow-endcap termination and associated method”  
**Patent No. US 7,379,648, issued May 27, 2008**
- “Photonic-crystal-rod amplifiers for high-power pulsed optical radiation and associated method”  
**Patent No. US 7,379,237, issued May 27, 2008**
- “Method and apparatus for long-range LIDAR and active imaging with optical output from a photonic-crystal rod”  
**Patent No. US 7,375,877, issued May 20, 2008**

F. Di Teodoro, C. D. Brooks, and C. Lemaire:

- “Multi-segment photonic-crystal-rod waveguides for amplification of high-power pulsed optical radiation and associated method”  
**Patent No. US 7,430,352, issued September 30, 2008**
- “Monolithic or ribbon-like multi-core photonic-crystal fibers and associated method”  
**Patent No. US 7,400,804, issued July 15, 2008**
- “Multi-segment photonic-crystal-rod waveguides coupled across a free-space gap and associated method”  
**Patent No. US 7,260,299, issued August 21, 2007**

### **Journal Articles**

E. Chernova, C. Brooks, D. Chvostova, Z. Bryknar, A. Dejneka, and M. Tyunina  
“*Optical NIR-VIS-VUV constants of advanced substrates for thin-film devices,*”  
**Optics Materials Express Vol. 7, Issue 11, 3844 (2017)**

M. Bondu, C. Brooks, C. Jakobsen, K. Oakes, P. M. Moselund, L. Leick, O. Bang, A. Podoleanu  
“*High energy supercontinuum sources using tapered photonic crystal fibers for multispectral photoacoustic microscopy,*”  
**Journal of Biomedical Optics 21(6), 061005 (2016)**

P. Madasamy, D. R. Jander, C. D. Brooks, T. H. Loftus, A. M. Thomas, P. Jones, and E. C. Honea,  
“*Dual-grating spectral beam combination of high-power fiber lasers,*”  
**IEEE Journal of Selected Topics in Quantum Electronics, Vol. 15, Issue 2 (2009)**

C. D. Brooks and F. Di Teodoro,  
“*High peak power operation and harmonic generation of a single-polarization, Yb-doped photonic crystal fiber amplifier,*”  
**Optics Communications Vol. 280, Issue 2, 424 (2007)**

F. Di Teodoro and C. D. Brooks,  
“*Fiber sources reach multimewatt peak power in ns pulses,*”  
**Laser Focus World, Vol. 42, Issue 11, p. 94-98 (2006)**

C. D. Brooks and F. Di Teodoro,  
“*Multimewatt peak-power, single-transverse-mode operation of a 100  $\mu\text{m}$  core-diameter, Yb-doped rodlike photonic crystal fiber amplifier,*”  
**Applied Physics Letters 89, 111119 (2006)**

C. D. Brooks and F. Di Teodoro,  
“1-mJ energy, 1-MW peak-power, 10-W average-power, spectrally narrow,  
diffraction-limited pulses from a photonic-crystal fiber amplifier,”  
**Optics Express Vol. 13, Issue 22, 8999 (2005)**

F. Di Teodoro and C. D. Brooks,  
“Multistage Yb-doped fiber amplifier generating MW peak-power, subnanosecond  
pulses,”  
**Optics Letters 30, 3299 (2005)**

F. Di Teodoro and C. D. Brooks,  
“1.1 MW peak-power, 7 W average-power, high-spectral-brightness, diffraction-  
limited pulses from a photonic crystal fiber amplifier,”  
**Optics Letters 30, 2694 (2005)**

### **Peer-reviewed Articles in Conference Proceedings**

J. Minelly, F. Di Teodoro, C. D. Brooks, and S. Desmoulins  
“Micro-structured High Power Fiber Lasers and Amplifiers”  
**Lasers and Electro-Optics Society, Winter Topical Meeting Series, 2008  
IEEE/LEOS, 148 (2008)**

F. Di Teodoro and C. D. Brooks  
“Multi-mJ energy, multi-MW peak-power photonic crystal fiber amplifiers with near-  
diffraction-limited output”  
**Technical Digest of Conference on Lasers & Electro-optics (CLEO), CFI3 (2007)**

J. Minelly, F. Di Teodoro, M. Savage-Leuchs, D. Alterman, S. Desmoulins, C. D.  
Brooks, and E. Eisenberg  
“High peak power and high energy fiber amplifiers”  
**Proceedings of the SPIE (“Fiber Lasers IV: Technology, Systems, and  
Application”, edited by Donald J. Harter, Andreas Tünnermann, Jes Broeng, and  
Clifford Headley III), 6453, 645302 (2007)**

F. Di Teodoro and C. D. Brooks  
“Multi-MW peak power single-transverse mode operation of a 100 micron core  
diameter, Yb-doped photonic crystal rod amplifier”  
**Proceedings of the SPIE (“Fiber Lasers IV: Technology, Systems, and  
Application”, edited by Donald J. Harter, Andreas Tünnermann, Jes Broeng, and  
Clifford Headley III), 6453, 645318 (2007)**

J. Minelly, F. Di Teodoro, M. Savage-Leuchs, D. Alterman, C. D. Brooks, and E.  
Eisenberg  
“High peak power and high energy fiber amplifiers”  
**Lasers and Electro-Optics Society (LEOS 2006), 203 (2006)**

F. Di Teodoro and C. D. Brooks,  
“1-mJ energy, 1-MW peak-power, 10-W average-power, diffraction-limited pulses  
from an Yb-doped photonic-crystal fiber amplifier,”  
**Technical Digest of Advanced Solid-State Photonics (ASSP 2006), WA4 (2006)**

F. Di Teodoro and C. D. Brooks,  
“Harmonic generation of an Yb-doped photonic-crystal fiber to obtain 1ns pulses of  
410, 160, and 190kW peak-power at 531, 354, and 265nm wavelength,”  
**Technical Digest of Advanced Solid-State Photonics (ASSP 2006), ME4 (2006)**

C. D. Brooks and F. Di Teodoro,  
“High-peak-power, linearly-polarized, diffraction-limited pulses from a large-core  
Yb-doped photonic crystal fiber for harmonic generation,”

**Proceedings of the SPIE (“Fiber Lasers III: Technology, Systems, and Applications,” edited by Andrew J. Brown, Johan Nilsson, Don J. Harter, Andreas Tunnermann), 6102, 610224 (2006)**

F. Di Teodoro and C. D. Brooks,  
“MW peak-power, mJ pulse energy, multi-kHz repetition rate pulses from Yb-doped fiber amplifiers,”

**Proceedings of the SPIE (“Fiber Lasers III: Technology, Systems, and Applications,” edited by Andrew J. Brown, Johan Nilsson, Don J. Harter, Andreas Tunnermann), 6102, 61020K (2006)**

F. Di Teodoro and C. D. Brooks,  
“Very large-core, single-mode Yb-doped photonic-crystal rod for multi-MW peak power generation,”

**Proceedings of the SPIE (“Fiber Lasers III: Technology, Systems, and Applications,” edited by Andrew J. Brown, Johan Nilsson, Don J. Harter, Andreas Tunnermann), 6102, 61020D (2006)**

F. Di Teodoro and C. D. Brooks,  
“Photonic-crystal fiber amplifier generating 1.1-MW peak-power, spectrally narrow, diffraction-limited pulses at 1064 nm,”

**Technical Digest of Conference on Lasers & Electro-optics, Pacific Rim (CLEO-PR), p. 406-407 (2005)**

F. Di Teodoro and C. D. Brooks,  
“1.1-MW peak-power, high-spectral-brightness, diffraction-limited sub-ns pulses from an Yb-doped photonic-crystal fiber amplifier,”

**Technical Digest of Solid State and Diode Laser Technology Review (SSDLTR-2005), Fiber-6 (2005)**

### **Co-authored Conference Presentations**

A. A. Kosterev, F. K. Tittel, A. J. Henderson, and C. D. Brooks  
“Development of broadband atmospheric absorption sensor based on quartz-enhanced photoacoustic spectroscopy”

**Optics East 2007, Infrared, Mid-IR, and Terahertz Technologies for Health and the Environment II, Boston, Massachusetts, 9-12 September 2007**

J. Minelly F. Di Teodoro, M. Savage-Leuchs; D. Alterman; C. D. Brooks; E. Eisenberg,

“High Peak Power and High Energy Fiber Amplifiers”

**19th Annual Meeting of the IEEE Lasers and Electro-Optics Society (LEOS 2006), Montreal, Canada, 29 October-2 November 2006.**

C. D. Brooks and F. Di Teodoro

“High-peak-power, linearly-polarized, diffraction-limited pulses from a large-core Yb-doped photonic crystal fiber”

**Laser and Applications in Science and Engineering symposium (LASE 2006), Photonics West 2006, San Jose, California, 21-26 January 2006**