

1. Record Nr.	UNINA9910452464403321
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Titolo	Ceramic lasers // authors, Akio Ikesue, Yan Lin Aung, Voicu Lupei [[electronic resource]]
Pubbl/distr/stampa	Cambridge : , : Cambridge University Press, , 2013
ISBN	1-139-88775-0 1-107-24080-8 1-107-25057-9 1-68015-988-7 1-107-24808-6 1-107-24974-0 0-511-97804-9 1-107-24725-X 1-107-24891-4
Descrizione fisica	1 online resource (xii, 445 pages) : digital, PDF file(s)
Disciplina	621.36/6
Soggetti	Laser materials Ceramic materials
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Title from publisher's bibliographic system (viewed on 05 Oct 2015).
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Machine generated contents note: 1.1. Research background -- 1.2. Technical problems of melt-growth single crystals -- 1.3. Technical problems of ceramics -- 1.4. Purpose of this research -- 1.5. Outline of the book -- References -- 2.1. Interaction of quantum systems with electromagnetic radiation (radiation absorption and emission processes in quantum systems) -- 2.2. Solid-state lasers -- 2.3. The flow of excitation inside the laser material -- 2.4. Laser emission processes -- 2.5. The spatial distribution of the de-excitation processes -- 2.6. Thermal field inside the pumped laser material and thermal effects -- 2.7. Performance scaling of solid-state lasers -- 2.8. The laser material -- References -- 3.1. Introduction -- 3.2. Microstructure and optical characteristics of Nd:YAG processed by HIP (hot isostatic pressing) -- References -- 4.1. Current status of single crystal technology -- 4.2.

Requirements for sesquioxide ceramic lasers -- 4.3. Synthesis of optical grade sesquioxide ceramics -- 4.4. Optical quality and laser performance -- References -- 5.1. Production of heavily doped Nd:YAG and lasing characteristics -- 5.2. Effect of impurity (Si) on Nd solid-melt in YAG ceramics -- References -- 6.1. Introduction -- 6.2. Experimental procedure -- 6.3. Results -- 6.4. Discussion -- 6.5. Summary -- References -- 7.1. Composite technology -- 7.2. Ceramic fiber laser -- 7.3. Single crystal ceramics produced by sintering -- 7.4. Summary -- References -- 8.1. Garnet system materials -- 8.2. Perovskite system materials -- 8.3. Non-oxide system (II-VI compound) materials -- 8.4. Fluoride system materials -- 8.5. Applications in the fields of biotechnology and medical technology -- 8.6. High intensity lasers for engine ignition -- 8.7. Investigation of solid-state lasers as solar pump lasers -- References -- References -- 10.1. Structural characterization of doped ceramics by optical spectroscopy -- 10.2. The quantum states of the doping ions -- 10.3. Radiative and non-radiative de-excitation processes -- 10.4. Distribution of the doping ions in ceramics -- 10.5. Conversion of excitation in doped ceramics -- 10.6. Conclusions from high resolution optical spectroscopy of laser ceramics -- References -- 11.1. Pumping schemes -- 11.2. Radiative and non-radiative processes in ceramics -- 11.3. Ceramic laser materials and components -- 11.4. Ceramic lasers -- 11.5. Concluding remarks: the state of the art and directions of development of ceramic lasers -- References.

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## Sommario/riassunto

Until recently, ceramic materials were considered unsuitable for optics due to the numerous scattering sources, such as grain boundaries and residual pores. However, in the 1990s the technology to generate a coherent beam from ceramic materials was developed, and a highly efficient laser oscillation was realized. In the future, the technology derived from the development of the ceramic laser could be used to develop new functional passive and active optics. Co-authored by one of the pioneers of this field, the book describes the fabrication technology and theoretical characterization of ceramic material properties. It describes novel types of solid lasers and other optics using ceramic materials to demonstrate the application of ceramic gain media in the generation of coherent beams and light amplification. This is an invaluable guide for physicists, materials scientists and engineers working on laser ceramics.

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2. Record Nr.	UNINA9910821946203321
Titolo	More than a monologue . Volume 1 Voices sof our times : sexual diversity and the catholic church // edited by Christine Firer Hinze and J. Patrick Hornbeck II
Pubbl/distr/stampa	New York, New York : , : Fordham University Press, , 2014 ©2014
ISBN	0-8232-5766-5 1-322-96547-1 0-8232-5765-7 0-8232-6124-7 0-8232-5763-0 0-8232-5658-8 0-8232-5661-8 0-8232-6122-0 0-8232-5659-6
Descrizione fisica	1 online resource (240 p.)
Collana	Catholic Practice in North America
Disciplina	261.8357660973
Soggetti	Sexual orientation - Religious aspects - Christianity Sex - Religious aspects - Catholic Church
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	Front matter -- Contents -- Acknowledgments -- Introduction -- 1. Learning to Speak -- 2. Talking About Homosexuality by the (Church) Rules -- Response to Mark D. Jordan -- 3. Lesbian Nuns: A Gift to the Church -- The Prophetic Life of Lesbian Nuns: A Response to Jeannine Gramick -- 4. Seminary, Priesthood, and the Vatican's Homosexual Dilemma -- 5. Same- Sex Marriage, the Right to Religious and Moral Freedom, and the Catholic Church -- 6. God Sets the Lonely in Families -- Response to Patricia Beattie Jung -- 7. Same-Sex Marriage and Catholicism Dialogue, Learning, and Change -- 8. Embracing the Stranger -- 9. Domine, Non Sum Dignus -- 10. Wild(e) Theology -- Afterword -- Notes -- Contributors -- Index

This volume, like its companion, *Voices of Our Times*, collects essays drawn from a series of public conferences held in autumn 2011 entitled “More than a Monologue.” The series was the fruit of collaboration among four institutions of higher learning: two Catholic universities and two nondenominational divinity schools. The conferences aimed to raise awareness of and advance informed, compassionate, and dialogical conversation about issues of sexual diversity within the Catholic community, as well as in the broader civic worlds that the Catholic Church and Catholic people inhabit. They generated fresh, rich sets of scholarly and reflective contributions that promise to take forward the delicate work of theological-ethical and ecclesial development. Along with *Voices of Our Times*, this volume captures insights from the conferences and aims to foster what the Jesuit Superior General, Fr. Adolfo Nicolas, has called the “depth of thought and imagination” needed to engage effectively with complex realities, especially in areas marked by brokenness, pain, and the need for healing. The volumes will serve as vital resources for understanding and addressing better the too often fraught relations between LGBTQ (lesbian, gay, bisexual, transgender, and queer) persons, their loved ones and allies, and the Catholic community. *Inquiry, Thought, and Expression* explores dimensions of ministry, ethics, theology, and law related to a range of LGBTQ concerns, including Catholic teaching, its reception among the faithful, and the Roman Catholic Church’s significant role in world societies. Within the volume, a series of essays on ministry explores various perspectives not frequently heard within the church. Marriage equality and the treatment of LGBTQ individuals by and within the Roman Catholic Church are considered from the vantage points of law, ethics, and theology. Themes of language and discourse are explored in analyses of the place of sexual diversity in church history, thought, and authority. The two volumes of *More than a Monologue*, like the conferences from which they developed, actively move beyond the monologic voice of the institutional church on the subject of LGBTQ issues, inviting and promoting open conversations about sexual diversity and the church. Those who read *Inquiry, Thought, and Expression* will encounter not just an excellent resource for research and teaching in the area of moral theology but also an opportunity to actively listen to and engage in groundbreaking discussions about faith and sexuality within and outside the Catholic Church.

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