

1.	Record Nr.	UNINA990009891810403321
	Autore	Anderson, Chris
	Titolo	Makers : il ritorno dei produttori = per una nuova rivoluzione industriale / Chris Anderson
	Pubbl/distr/stampa	Milano : Rizzoli etas, 2013
	ISBN	978-88-17-0-6461-3
	Descrizione fisica	311 p. ; 18 cm
	Disciplina	338.064
	Locazione	BFS
	Collocazione	338.064 AND 1
	Lingua di pubblicazione	Italiano
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
2.	Record Nr.	UNINA9910571891703321
	Autore	Aronov B. S (Boris Samuilovich)
	Titolo	Piezoelectric Electromechanical Transducers for Underwater Sound . Part II Subsystems of the electroacoustic transducers / / Boris S. Aronov
	Pubbl/distr/stampa	Boston, MA : , : Academic Studies Press, , [2022] ©2022
	ISBN	9781644698266 1644698269
	Edizione	[1st ed.]
	Descrizione fisica	1 online resource (444 p.)
	Disciplina	681.2
	Soggetti	Piezoelectric transducers Underwater acoustics Technology & Engineering / Acoustics & Sound
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia

Frontmatter -- PREFACE -- TABLE OF CONTENTS -- CHAPTER 4  
VIBRATION OF ELASTIC BODIES -- CHAPTER 5 ELECTROMECHANICAL  
CONVERSION -- CHAPTER 6 ACOUSTIC RADIATION -- LIST OF SYMBOLS  
-- APPENDIX A. Properties of Passive Materials -- APPENDIX B.  
Properties of Piezoelectric Ceramics -- APPENDIX C. Special Functions

The book presents a broad-scope analysis of piezoelectric electromechanical transducers and the related aspects of practical transducer design for underwater applications. It uses an energy method for analyzing transducer problems that provides the physical insight important for the understanding of electromechanical devices. Application of the method is first illustrated with transducer examples that can be modeled as systems with a single degree of freedom, (such as spheres, short cylinders, bars and flexural disks and plates made of piezoelectric ceramics). Thereupon, transducers are modeled as devices with multiple degrees of freedom. In all these cases, results of modeling are presented in the form of equivalent electromechanical circuits convenient for the calculation of the transducers' operational characteristics. Special focus is made on the effects of coupled vibrations in mechanical systems on transducer performance. The book also provides extensive coverage of acoustic radiation including acoustic interaction between the transducers. The book is inherently multidisciplinary. It provides essential background regarding the vibration of elastic passive and piezoelectric bodies, piezoelectricity, acoustic radiation, and transducer characterization. Scientists and engineers working in the field of electroacoustics and those involved in education in the field will find this material useful not only for underwater acoustics, but also for electromechanics, energy conversion and medical ultrasonics. Part II contains general information on vibration of mechanical systems, electromechanical conversion in the deformed piezoceramic bodies, and acoustic radiation that can be used independently for treatment transducers of different type.