

テーマ番号 (M510) : テーマ名 (人工筋肉の研究) {SRI インターナショナル}

#### 主要論文

- 1) R. Pelrine, R. J. Eckerle, and S. Chiba “ Review of Artificial Muscle Approaches “, Proc. Theird Intl. Symmposium on Micro Machine and Human Science, Nagoya, Japan, 1992.
- 2) R. Pelrine, R. Kornbluh, J. Joseph, and S. Chiba, “ Electrostriction of Polymer Films for Microactuators ” , Proc. IEEE Tech Annual Intl. Workshop on Micro Electro Mechanical Systems, Nagoya, Japan, pp 238-243, 1997.
- 3) R. Pelrine, R. Kornbluh, and J. Joseph, “ Electrostriction of Polymer Dielectrics with Compliant Electrodes as Means of Actuation “, Sensor and Actuators A: Physical 64, pp. 77-85, 1998.
- 4) R. Kornbluh, R. Pelrine, J. Joseph, R. Hydt, Q. Pei, and Chiba, “ High-Field Electrostriction of Elastrometric Polymer Dielectrics for Actuation “, Proc. SPIE Sixth Intl. Symposium on Smart Structures and Materials: Electro-Active Polymer Actuators and Devices, 1-2 March, Newport Beach, California, pp. 149-161, 1999.
- 5) R. Pelrine, R. Kornbluh, J. Joseph, O. Pei, and S. Chiba, “ Recent Progress in Artificial Muscle Micro Actuators “, Proc. Fifth Intl. Micromachine Symposium, Tokyo, Japan, 1999.
- 6) Pelrine, R. Kornbluh, Q. Pei, and J. Joseph, “ High Speed Electrically Actuated Elastomers with over 100% Strain “, Science, Vol. 287, No. 5454, pp. 836-839, 2000.
- 7) R. Kornbluh, R. Pelrine, J. Joseph, Q. Pei, and S. Chiba, “ Ultra-High Strain Response of Elastromeric Polymer Dielectrics, Proc. Material Research Society Fall Meeting, Symposium FF: Electroactive Polymers, Boston, Massachusetts, 2000.
- 8) R. Pelrine, R. Kornbluh, and G. Korfod, “ High-Strain Actuator Materials Based on Dielectric Elastromers “, Advanced Materials, Vol.12, No. 16, pp. 1223-1225, 2000.
- 9) R. Kornbluh, R. Pelrine, Q. Pei, and V. Shastri., “ Application of Dielectric EAP Actuators “, Chapter 16 of Elctroactive Polymer (EAP) Actuators as Artificial Muscles-Really, Potential and Challenges, ed. Y. Bar-Cohen, pp. 457-495, SPIE Press., 2001.

#### 主要特許リスト

- 1) R. Pelrine et al., “ Electroactive Polymer Transducers and Actuators, U.S. Patent Application No. 09/620,025, filed 20 July 2000.
- 2) R. Pelrine et al., “ Electroactive Polymer Electrodes” , U.S. Patent Application No. 09/619,843, filed 20 July 2000.