

**Ruibin Liu** received a B.S. degree in electro-ceramics from South China University of Technology, Guangzhou, China, in 1984, and a Ph. D. degree in material engineering from Shanghai Institute of Ceramics, Chinese Academy of Sciences, Shanghai, China in 1991. He received the “Outstanding Young Scientist” award from Shanghai City Government in May 1996.

From 1991 to 1996 he was an Engineer and Associate Professor at the Shanghai Institute of Ceramics, Chinese Academia of Sciences, Shanghai, China. From 1996 to 1996 he was a Postdoctoral Fellow at the Materials Research Laboratory, Pennsylvania State University, PA. From 1999 to 2000 he was a Postdoctoral Fellow at the Sunnybrook Health Science Center, University of Toronto, Toronto, Canada. From 2000 to 2002 he was an Intellectual Property Officer and Director of Canada Branch at TradeTrek.com, Stamford, CT. From 2003 to 2004 he was a Research Engineer, at the Sunnybrook Health Science Center, University of Toronto, Toronto, Canada. From 2004 to 2008 he was a Research Associate at the NIH Ultrasound Transducer Resource Center, Department of Biomedical Engineering, University of Southern California, Los Angeles, CA, USA. From 2008 to present, Ruibin has worked as a Senior Scientist at Blatek, Inc., State College, PA, USA.

## SELECTED PUBLICATIONS:

- Kim H.H., Cannata J., **Liu R.**, Chang J.H., Silverman R., Shung K.K., [20MHz/40MHz Dual Element Transducers for High Frequency Harmonic Imaging \(pdf\)](#), Accepted for publication in IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, Vol. 55, No. 12, pp. 2683-2691, 2008.
- Steven D.N., Cannata J., **Liu R.**, Zhao J.Z., Shung K.K., Nguyen H., Chia R., Dentinger A., Wildes D., Thomenius K.E., Mahajan A., Shivkumar K., Kim K., O'Donnell M., Nikoozadeh A., Oralkan O., Khuri-Yakub P.T., Sahn D., [Multifunctional Catheters Combining Intracardiac Ultrasound Imaging and Electrophysiology Sensing \(pdf\)](#), IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, Vol.55, No. 7, pp. 1570-1581, 2008.
- Steven D.N., Cannata J., **Liu R.**, Zhao J.Z., Shung K.K., Nguyen H., Chia R., Dentinger A., Wildes D., Thomenius K.E., Mahajan A., Shivkumar K., Kim H., O'Donnell M., Sahn D., [The Acoustic Lens Design and in Vivo Use of a Multifunctional Catheter Combining Intracardiac Ultrasound Imaging and Electrophysiology Sensing \(pdf\)](#), IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, Vol. 55, No. 3, pp.602-618, 2008.
- **Liu R.**, Kim H., Cannata J., Chen G.S., Shung K.K., [Self-Focused 1-3 composite LiNbO<sub>3</sub> Single Element Transducers for High Frequency HIFU Applications \(pdf\)](#), 2007 IEEE Ultrasonic Symposium, pp. 949-952, 2007.
- Hu C.H., **Liu R.**, Zhou Q.F., Yen J., Shung K.K., [Coded Excitation Using Biphasic-coded Pulse with Mismatched Filters for High Frequency Ultrasound Imaging](#), Ultrasonics, Vol. 44, No. 3, pp. 330-336, 2006.
- **Liu, R.**, Harasiewicz, K. A., and Foster, F. S., [Interdigital Pair Bonding for High Frequency \(20-50 MHz\) Ultrasonic Composite Transducer \(pdf\)](#), IEEE Transactions on Ultrasonic, Ferroelectrics, and Frequency Control, Vol. 48, No. 1, pp. 299-306, 2001.
- **Liu, R.**, Harasiewicz, K.A., Knapik, D., Freeman, N.A., and Foster, F. S., [2-2 Piezoelectric Composite with High Density and Fine Scale Fabricated by Interdigital Pair Bonding](#), Applied Physics Letter, Vol. 75, pp. 3390-3392, 1999.
- **Liu, R.**, Zhang, Q. M., and Cross, L. E., *Experimental Investigation of Field Induced Direct Piezoelectric Properties in Polyurethane Elastomer Under Quasistatic Condition*, Journal of Applied Polymer Science, Vol. 73, pp. 2603-2609, 1999.
- **Liu, R.**, Guo, R., Bhalla, S., and Cross, L. E. etc., [Observation of Dynamic Ferroelectric Phase Transition and Static Domain Structure in Crystal Ion Slicing \(CIS\) LiNbO<sub>3</sub> Film by Polarization Optical Microscopy](#), Materials Letters, Vol.39, pp. 264-267, 1999.
- **Liu, R.**, Guo, R., Bhalla, S, and Cross, L. E. etc., *Dielectric and Pyroelectric Properties of Crystal Ion Slicing (CIS) LiNbO<sub>3</sub> Crystal Film*, Ferroelectrics, Vol. 248(1-4), pp. 45-56, 2000.
- **Liu, R.**, Cross, L.E. and Knowles G. et al, [A Stackable Bonding-Free Flexensional Piezoelectric Actuator](#), Journal of Electroceramics, 4:1, 201-206, 2000.
- **Liu, R.**, Wang, Q.M., and Cross, L. E., [Piezoelectric Pseudo-Shear Mode Actuator Made by L-Shape Joint Bonding](#), Journal of Materials Science: Materials in Electronics, Vol. 9, pp. 453-456, 1998.
- Levy, M., Osgood, R.M., Jr. **Liu, R.**, and Cross, L.E. et al., [Fabrication of Single Crystal Lithium Niobate Films by Crystal Ion Slicing](#), Applied Physics Letter, Vol. 73, pp. 2293-2295, 1998.
- **Liu, R.**, Lin, S. Lin, Y., Qu, C., [Tape Casting Prepared Pyroelectric Thick Film Used for Focal Plane Thermal Imaging Arrays](#), Proceedings of 1<sup>st</sup> Asia Meeting on Ferroelectrics, Ferroelectrics, Vol. 196 (995), pp. 53-56, Xi-An, Oct., 1995.
- **Liu, R.**, Lin, S., Qu, C., et al, [Hot-Pressing and Pressureless Sintering for Large Size and Good Mechanical Strength Pyroelectric Block Ceramics](#), Sintering and Materials, Edited by Li Nan, International Academy Press, Beijing, pp. 182-184, 1995
- **Liu, R.**, Lin, S, Qu, C., ["Sandwich" Sintering Method for Processing Large and Smooth Monolayer Thick Ceramic Film Made by Tape Casting](#), Sintering and Materials, Edited by Li Nan, International Academy Press, Beijing, pp.309-312, 1995.
- **Liu, R.**, Lin, S., Qu, C., et al, [Single Element IR Detector Made of Pyroelectric Thick Film Ceramics](#), Infrared Technology, Vol. 17, No. 4, pp. 19-20, 1995.(In Chinese).
- **Liu, R.**, Lin, S., Qu, C., et al, [Pyroelectric Ceramics with the Desired Properties for Application on IR Focal Plane Imaging](#), Journal of the Chinese Ceramic Society, Vol. 23, NO. 3, pp. 327-330, 1995 (In Chinese).
- **Liu, R.**, Lin, S., Qu, C., et al, [Pyroelectric Ceramics with Low Resistivity \(pdf\)](#), Proceedings of the Ninth IEEE International Symposium on Applications of Ferroelectrics (IEEE-ISAF 1994), Penn State University, Aug. 8-10, pp. 815-816, 1994.