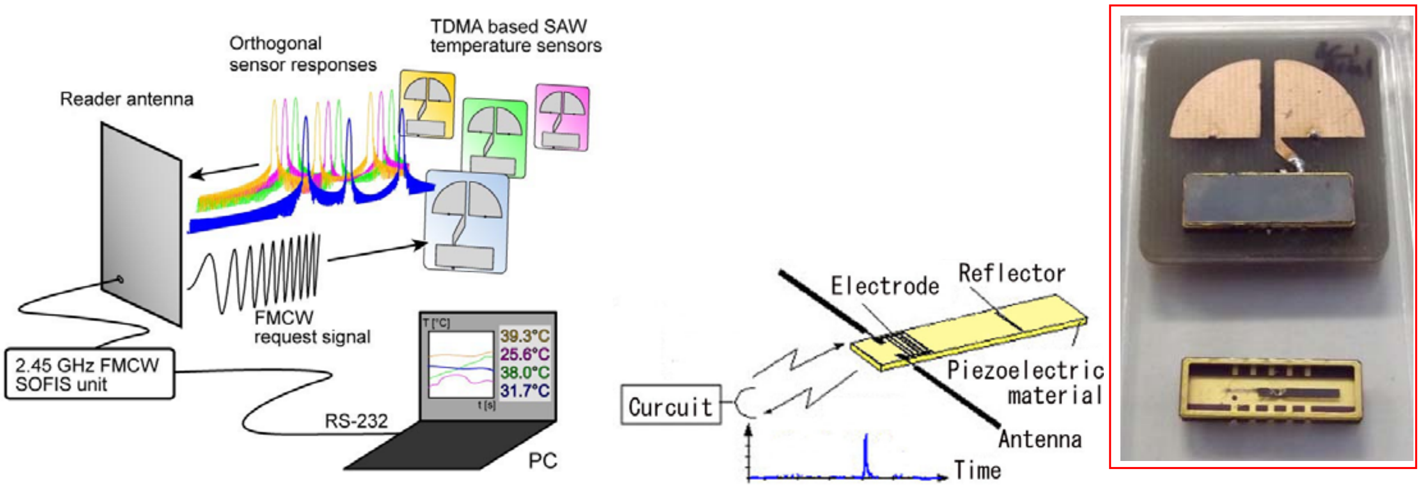
E13

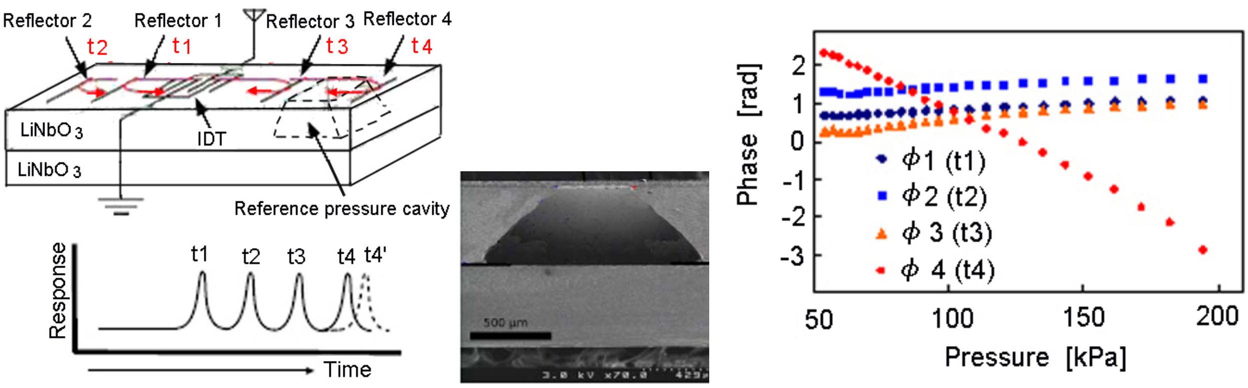
SAW Passive Wireless Sensor

(Strategic Information and Communication R&D Promotion Program (SCOPE)　2006FY – 2008FY)



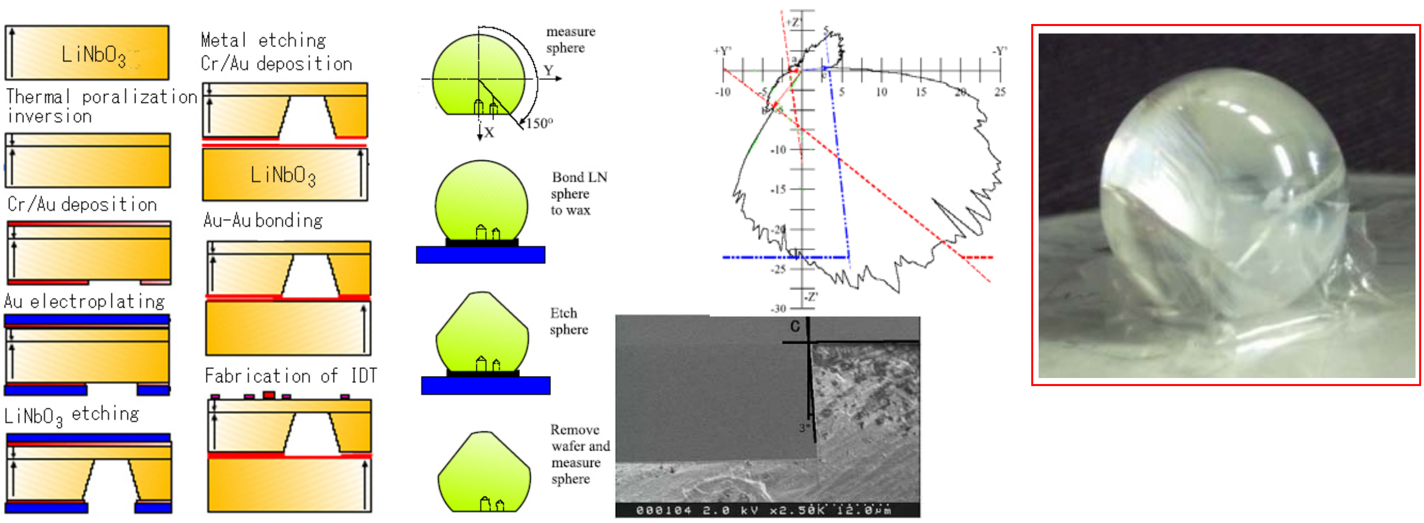
Principle of SAW passive wireless sensor

Reference : J. H. Kuypers, L. M. Reindl, S. Tanaka and M. Esashi, Maximum Accuracy Evaluation Scheme for Wireless SAW Delay Line Sensors, IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 55 (2008) pp.1640-1652



Application to tire pressure monitor (Tohoku Univ. – Nissan motor)

Reference : S.Hashimoto, J.H.Kuypers, S.Tanaka and M.Esashi, Design and Fabrication of Passive Wireless SAW Sensor for Pressure Measurement, Trans. IEE of Japan, 128-E (2008) pp.231-234



Selective etching and simulation of anisotropic etching of $LiNbO_3$

Reference : A. B. Randles, M. Esashi and S. Tanaka, Etch Stop Process for Fabrication of Thin Diaphragms in Lithium Niobate, Jap. J. of Applied Physics, 46 (2007) pp.L1099-L1101

A.B.Randles, M.Esashi and S.Tanaka, Etch Rate Dependence on Crystal Orientation of Lithium Niobate, IEEE Trans. on Ultrasonics, Ferroelectrics, and Frequency Control, 57 (2010) pp.2372-2380