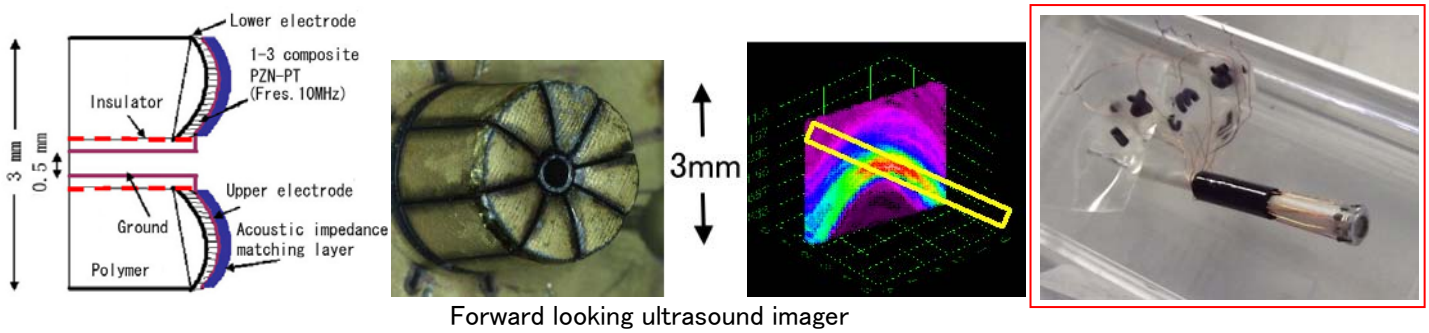
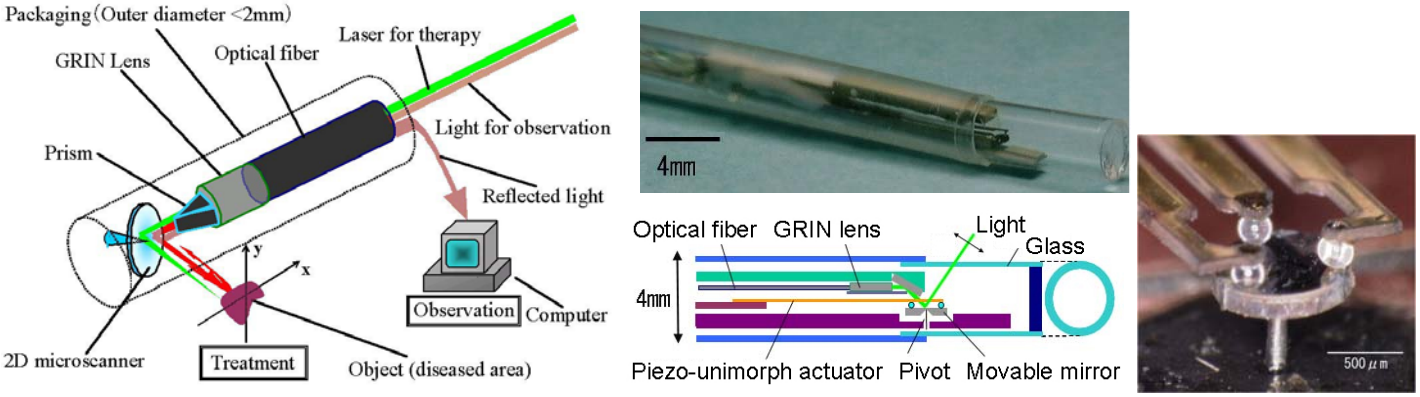
D13

Imaging for Minimal Invasive Medicine



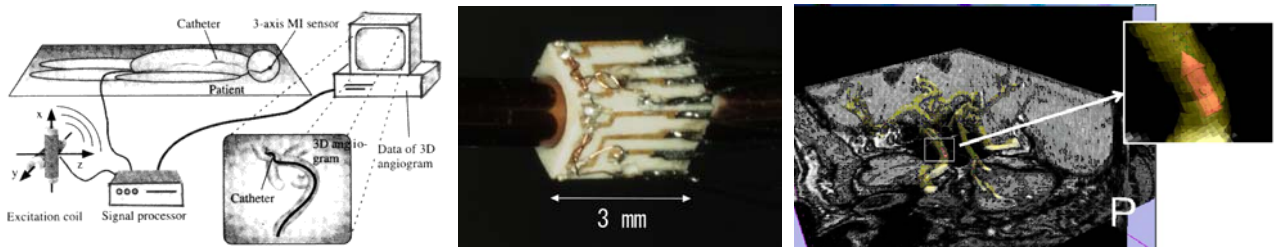
Forward looking ultrasound imager

Reference : J.-J.Chen, M.Esashi, O.Osato, K.Chihara, Y.Haga, Development of a Forward -looking Ultrasound Imager for Intravascular Treatment, Trans. of the Japanese Soc. For Medical and Biological Engng., 43 (2006) pp.553-559



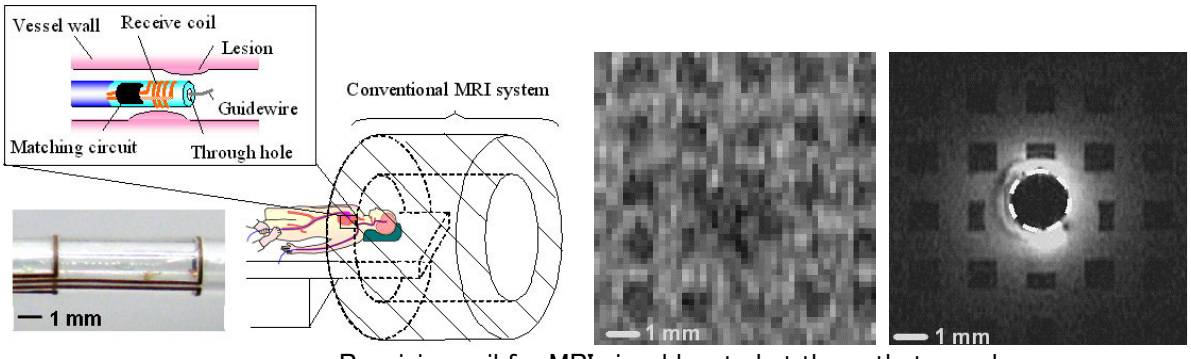
Optical scanner endoscope

Reference : H.Akahori, H.Wada, M.Esashi and Y.Haga, Tube Shape Piezoelectric 2D Microscanner for Minimally Invasive Laser Treatment, Technical Digest MEMS'2005 (2005) pp.76-79



Display system of position and direction for catheter tip using 3-axis magnetic sensor

Reference : K.Totsu, Y.Haga and M.Esashi, Three-axis Magneto-impedance Effect Sensor System for Detecting Position and Orientation of Catheter Tip, Sensors and Actuators, A 111 (2004) pp.304-309



Receiving coil for MRI signal located at the catheter end

Reference : S.Goto, T.Matsunaga, Y.Matsuoka, K.Kuroda, M.Esashi and Y.Haga, Development of High-Resolution Intraluminal and Intravascular MRI Probe Using Microfabrication on Cylindrical Substrates, Tech. Digests of MEMS 2007 (2007) pp.329-332