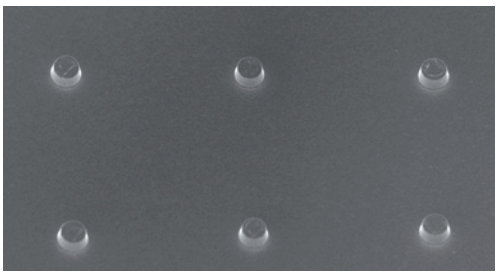
# Preparation of 10μm-Thick-PZT Films for Piezoelectric Film Devices

**Takashi IIJIMA**
*Smart Structure Research Center*
*e-mail: iijima-t@aist.go.jp*
*AIST Today Vol. 3, No.7 (2003) 12*

A combination of the preparation techniques for the ferroelectric films and the micro machining of Si is considered to be an effective way to fabricate micro-electromechanical systems (MEMS), such as piezoelectric micro-transducer devices for applications in the electrical and medical fields. In this study, disk shape lead zirconate titanate (PZT) thick films were successfully fabricated. More than 10-$\mu$m-thick PZT films were deposited onto Pt/Ti/$SiO_2$/Si substrate using a chemical solution deposition (CSD) process. Pt top electrode and PZT layer were etched by reactive ion etching (RIE) process, and 20 to 500-$\mu$m-diameter PZT micro disks were fabricated.

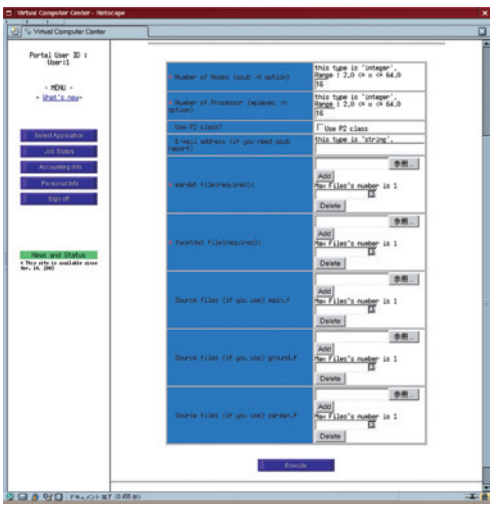


SEM micrograph of fabricated PZT micro disks by RIE process

# Implementation of a CFD Portal System by the Grid PSE Builder

**Naotaka YAMAMOTO**
*Grid Technology Research Center*
*e-mail: naotaka@ni.aist.go.jp*
*AIST Today Vol. 3, No. 9 (2003) 16*

We are constructing an ASP portal system for CFD simulations on the Tsukuba WAN network which has 10Gbps connections in Tsukuba, Ibaraki local area. The Grid PSE Builder, which is developed by our center and an efficient tool to build a portal system, is used in this construction. A user can submit his job with appropriate parameters and initial data files to a remote supercomputer through the portal server. The portal has a capability to obtain the results onto the local PC. Figure 1 shows a job submitting page of the portal system.



A job submitting page of the portal system.
A user can set job parameters and/or upload input data file from local PC in this page.