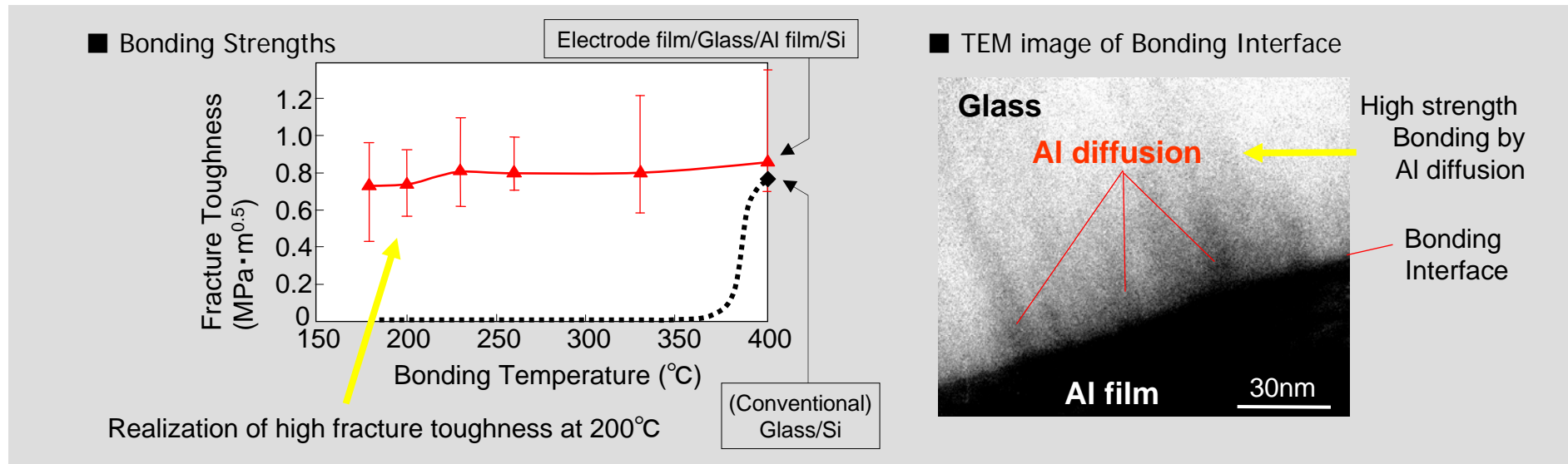


2005/9/29 Release

## Development of low temperature anodic bonding technology for glass and silicon at 200°C - Enabling bonding of optical components and MEMS at temperatures below solder melting point -



The Production Engineering Research Laboratory of Hitachi, Ltd. (GM: Dr. ITOH Fumikazu) announced the development of a new bonding technology which enables anodic bonding of glass and silicon at approximately 200°C. Conventionally, temperatures of approximately 400°C, were required for bonding, therefore materials used on the wafer and wafer structure, were restricted to those which could withstand such high temperatures. By reducing the bonding temperature to below solder melting point, it is now possible to bond silicon and glass wafers which contain solder or resin part, etc. As a result, new possibilities for producing electric components can be considered, as solder or resin can be used to form a film on a MEMS processed silicon wafer to be bonded to a glass wafer.

\* MEMS : Micro Electro Mechanical System