東京大学グローバルCOEプログラム　機械システム・イノベーション国際拠点

GMSI Global Center of Excellence for Mechanical Systems Innovation

第43回　GMSI公開セミナー

Low Temperature Direct Wafer Bonding: Mechanisms and Applications

Professor Cindy Colinge

Professor, California State University, Sacramento Principal Investigator at Tyndall National Institute in Cork, Ireland

日時：2010年 1月18日（月） 14:00-16:00
会場：東京大学工学部11号館　1階　講堂

要旨

Some of the recent challenges outlined in the **2008 International Technology Roadmap for Semiconductors (ITRS)** include reducing feature size for increased device density, increased speed and improved heat removal from the devices, novel interconnect schemes, signal isolation to reduce crosstalk in RF applications, and increasing the number of functions on a chip. As the end of the roadmap nears, *i.e.* scaling of devices is no longer feasible, new integration methods that permit further increase of density and functionality must be explored. One approach that has the potential for addressing all these issues is wafer bonding. Wafer bonding includes contacting whole wafers directly without an intermediate layer or “glue” (direct bonding), and bonding wafers using an intermediate layer, *e.g.* using a polymer, a metal, or spin-on-glass. The versatility of this technology has given rise to many improved and unique substrates, devices, circuits, and sensors. In this talk Professor Colinge will introduce the mechanisms behind low temperature direct bonding and will discuss applications that benefit from wafer bonding.

主催：　東京大学グローバルCOEプログラム「機械システム・イノベーション国際拠点」

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