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Anodic bonding of silicon and glass for bent monochromator

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Anodic bonding technology is a method which mainly by the aid of the electric field and temperature for connecting two materials such as glass-glass or glass-silicon wafer substrate by forming covalent bonding. The bent monochromator used in the synchrotron radiation which was made by high quality silicon wafer bonded onto concave cylindrical shape Pyrex glass base. In the past, it is made by gluing. The anodic bonding method for fabricating the bent monochromator which has more advantages than bonding by glue, such as tight bonding, non-intermediate, and simple process. This paper describes the detailed manufacturing processes and testing results.

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Footnotes

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Primary author: HUANG, Chun-Shien (National Synchrotron Radiation Research Center)

Co-authors: CHEN, Bo-Ying (National Synchrotron Radiation Research Center); KUAN, Chien-Kuang (National Synchrotron Radiation Research Center); LAI, Wei-Yang (National Synchrotron Radiation Research Center); TSENG, Tse-Chuan (National Synchrotron Radiation Research Center); WANG, Huai-San (National Synchrotron Radiation Research Center)

Presenter: LAI, Wei-Yang (National Synchrotron Radiation Research Center)

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