

# ENHANCING ADHESION BY ION BEAM TECHNIQUES

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Enhancing Adhesion between dissimilar materials by ion beam techniques were discussed. Ion irradiation was used to improve the adhesion between deposited thin copper or chromium film and polyimide substrate. The surface and interface analyses were carried out with RBS, FTIR, XPS, and SEM. The adhesion strength was determined by thermal fatigue test and the abrasive wear test. The thin film wear resistance of metal/polyimide systems was explained by means of the crystallinity of thin film, mixing amounts at interface and damage of substrate. Characteristic of Ion Assisted Deposition was reviewed to improve adhesion. The results of improvement due to Ion Assisted Deposition were described.