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**The effect of SAM interlayer on the crystalline orientation of PVDF-TrFE thin film in ferroelectric polymer capacitor** YOUN JUNG PARK, SEOK JU KANG, CHEOLMIN PARK, Department of Materials Science and Engineering, YONSEI UNIVERSITY, SEOUL, KOREA TEAM — Poly vinylidene fluorine-*co*-trifluoroethylene (P(VDF-TrFE)), one of the representative ferroelectric polymers, was used for a fabrication of metal-ferroelectrics-metal capacitor. As one way to control the crystalline structure of P(VDF-TrFE) in thin films, we formed organic buffer layer of self assembled monolayers(SAMs) between polymer films and bottom metal electrodes. The preferred orientation of P(VDF-TrFE) crystal with its *b*-axis perpendicular to the substrate without the insertion of an interlayer was changed into the orientation with *a*-axis of the crystal normal to the surface after the treatment of CH<sub>3</sub>-terminated alkanethiolate SAMs on bottom electrodes. Other kinds of alkanethiolates with their terminal groups of -OH and -COOH did not induce such an orientation shift in crystalline polymer thin films. The evolution of ferroelectric crystalline microdomains of P(VDF-TrFE) in the presence of various alkanethiolate SAMs interlayer was characterized by atomic force microscope (AFM), transmission electron microscope (TEM), grazing x-ray diffraction(GIXD) and displacement-electric field hysteresis loop measurement.

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