

Fig. 1. XRD spectra of CdTe grown under (a) Cd-rich conditions on InSb(100) substrate, (b) Te-rich conditions on InSb(100) substrate and (c) Te-rich conditions on InSb(211) substrate. CdTe layers grown under Cd-rich conditions result in high-quality films while Te-rich conditions have an increased linewidth and shifted peak position indicating alloying.

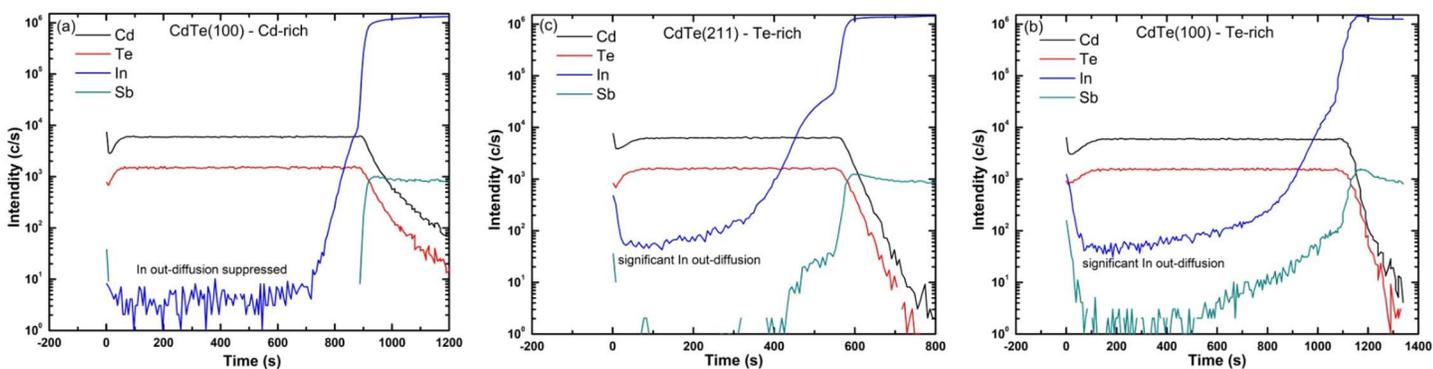


Fig. 2. SIMS of CdTe grown under (a) Cd-rich conditions on InSb(100) substrate, (b) Te-rich conditions on InSb(100) substrate and (c) Te-rich conditions on InSb(211)B substrate. The out-diffusion of In is suppressed to detection limit after initiation of CdTe layer under Cd-rich conditions. Significant out-diffusion of In is present throughout the entire CdTe layer under Te-rich conditions.

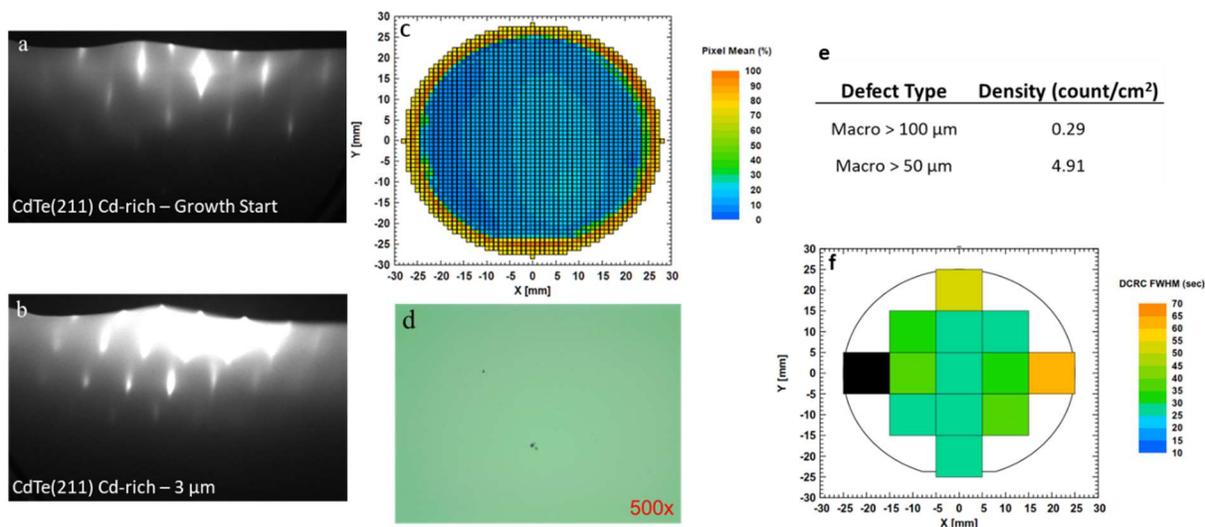


Fig. 3. A high-quality CdTe(211) virtual substrate has RHEED showing an inclined, streaky pattern with no twinning at growth start (a) and at 3 μm (b), uniform low haze (c) low defect density from Nomarski imaging (d) that is summarized by defect size (e), and a sub-30 arcsec rocking curve linewidth (f).