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**Luminescence properties of single crystalline Si quantum wells prepared by dry oxidation method and SOI wafer** YOUNG-KYU HONG, JAE HO BAHNG, NAM WOONG SONG, JA-YONG KOO, Korea Research Institute of Standards and Science — We have studied on optical characteristics of single crystalline Si quantum wells fabricated from silicon on insulator (SOI) wafers. Initially 110 nm thick Si layer was reduced down to 2 nm and sandwiched between SiO<sub>2</sub> layers by using dry oxidation method. Thickness variation of Si quantum well was examined by transmission electron microscope (TEM). Luminescence property of these Si quantum wells was investigated by photoluminescence measurement equipped with confocal microscope and excitation source of 325 nm. Not only the thickness of Si layer, influence of SiO<sub>2</sub> layer thickness on luminescence property was investigated too.

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