Journey of sand grains from river to deep marine estimated from bleaching percentage (BLP) of feldspar grains

*Masaaki Shirai[1]

1.Tokyo Metropolitan University

Optically stimulated luminescence has two remarkable properties, (1) the intensity of mineral grain luminescence increases with the amount of ionizing radiation absorbed by the grain; and (2) sufficient exposure to sunlight results in resetting of the luminescence signal (bleaching). Using these properties, evaluation for sand grain transport with the content of completely bleached grains (bleaching percentage: BLP) was established. Several case studies from riverine sand (Shirai et al., 2008; Shirai and Hayashizaki, 2013) to deep marine turbidite sand (Shirai and Hayashizaki, 2013) and sand grain transport processes inferred from these results are introduced.

Keywords: IRSL, bleaching, transport process

