APPENDIX A

i). Field photo of the outcrop HLPT (location: 24°35.74'N; 120°48.39'E, facing south, investigated on 03.04.2015, sampling on 16.01.2017). The outcrop is located at the left bank of the Hou-Long River, the continuous gravel bed is presented in the upper part of the outcrop with a thickness varying from one meter to more than ten meters. The sampling site is located at the southeastern marginal part of this outcrop, the exposure shows fine-grained, loamy coastal sediments in the lower, the gravel and cobble bed in the central part and silty loamy sediments in the upper part.

ii). Field photo of the outcrop XNPWH (location: 24°28.25'N; 120°40.29'E, facing south, investigated on 12.03.2018, sampling on 12.03.2018). The outcrop is located at the edge of one of the distal tableland segments, the slope foot is extended to the coastal plain. The height of this artificial outcrop is two to three meters.

iii). Field photo of the outcrop JJC (location: 24°27.52'N; 120°39.81'E, facing southeast, investigated on 17.01.2017, sampling on 18.03.2018). This outcrop is located at the edge and at the lower part of a distal tableland. The slope foot has direct contact to the coastal plain. This outcrop was recently artificially excavated. The surface is fresh, four main sediment units can be distinguished. The inclination (ca. 13° towards west) has affected the grayish marine/tidal (SiC layer) and yellowish coastal (SL layer) sediments in the lower part. A thin layering of gravels and cobbles (ca. 1m) had deposited horizontally on the upper part of the succession. The succession is covered by the silty sediments at the surface (SiL layer).

iv). Panorama photo of the outcrop TKD (location: 24°32.39'N; 120°42.46'E, facing east, investigated on 08.01.2017, sampling on 15.03.2018). This outcrop is the excavation of a road construction. The slope surface is partially covered by vegetation. The general succession is representing an intercalation of fine-grained loamy sediments and gravels. The layers are separated by very distinct boundaries.

v). Field photo of the outcrop TYGC (location: 24°26.86'N; 120°45.22'E, facing east, investigated on 14.03.2018, sampling on 14.03.2018). The outcrop is located on the escarpment as the topographical divide of the SH-I and the ST. This outcrop was excavated for road construction, but the slope surface is mainly covered by very dense vegetation. Two layers are distinguished as the thick gravel bed overlying fine-grained sands separated by a very distinct boundary.

vi). Field photo of the Fire Mountain (location: 24°21.22'N; 120°43.45'E, facing northwest, taken on 28.01.2010). The Fire Mountain is the highest elevation in the Miaoli Tableland, and categorized as SH-I. The thick gravels and cobbles are eroded and re-deposited at the foot slope as alluvial fans.

APPENDIX B

The general distribution between the recycling ratio versus De and recuperation versus De of each sample

APPENDIX C

The quartz-OSL decay curves, SAR-regeneration growth curves and the IRSL signals of each sample