**Response to reviewers**

1. Rows 31-32: Magnesium alloys have attracted attention in biomedical applications, especially as orthopedic implants, due to its good mechanical strength and biodegradability1-3. Reviewer: Dear authors please explain in more details for which biomedical (orthopedic) applications such corrosive alloy is used.

**According to referee's suggestion, the biomedical applications of this alloy was explain in more details in the introduction section.**

1. Figures 2 and 4 should be given as Evans diagram, potential vs logarithm current density, and mention breakdown potentials

**Your suggestion has been considered.**

1. Row 197: Representative Tafel plots obtained for the different samples in

Ringer solution are presented in Fig. 6.

Reviewer: after which period of time Tafel plots are recorded.

**In order to reach a steady-state current, Tafel plots are recorded after approximately 60 min of immersion in Ringer solution.**