Influence of surface treatment on PEDOT coatings:

Surface and electrochemical corrosion aspects of newly developed Ti alloy

A.Madhan Kumar\textsuperscript{a*}, M.A.Hussein\textsuperscript{a}, Akeem Yusuf Adesina\textsuperscript{b},

Suresh Ramakrishna\textsuperscript{c,d} and N. Al-Aqeeli\textsuperscript{b}

\textsuperscript{a}Centre of Research Excellence in Corrosion, Research Institute, King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia

\textsuperscript{b}Department of Mechanical Engineering, King Fahd University of Petroleum and Minerals, Dhahran 31261, Saudi Arabia

\textsuperscript{c}Graduate School of Biomedical Science and Engineering, Hanyang University, Seoul, South Korea

\textsuperscript{d}College of Medicine, Hanyang University, Seoul, South Korea
Figure S1 Schematic representation of contact angle measurement in static and dynamic mode.

Figure S2 EDS results of (a) Untreated TNZ (b) ST1 (c)ST2 and (d) ST3 TNZ substrates
Figure S3 Dynamic contact angle results of (a) Untreated TNZ (b) ST1 (c) ST2 and (d) ST3 TNZ substrates

Figure S4 EDS results of (a) PEDOT/UT (b) PEDOT/ST1 (c) PEDOT/ST2 and (d) PEDOT/ST3 TNZ substrates
Figure S5 LPR cures of uncoated and coated TNZ substrates
Figure S6 EIS circuits of uncoated and coated TNZ substrates
Figure S7 In vitro MG63 osteoblast Cell culture studies of PEDOT coatings on ST2 and ST3 TNZ substrates

Figure S8 Contact angle images of (a) PEDOT/UT (b) PEDOT/ST1 (c) PEDOT/ST2 and (d) PEDOT/ST3