

Supplementary Materials

Enhanced anti-corrosion and antibacterial functionalities of magnesium alloy via facile laser-chemical treatment

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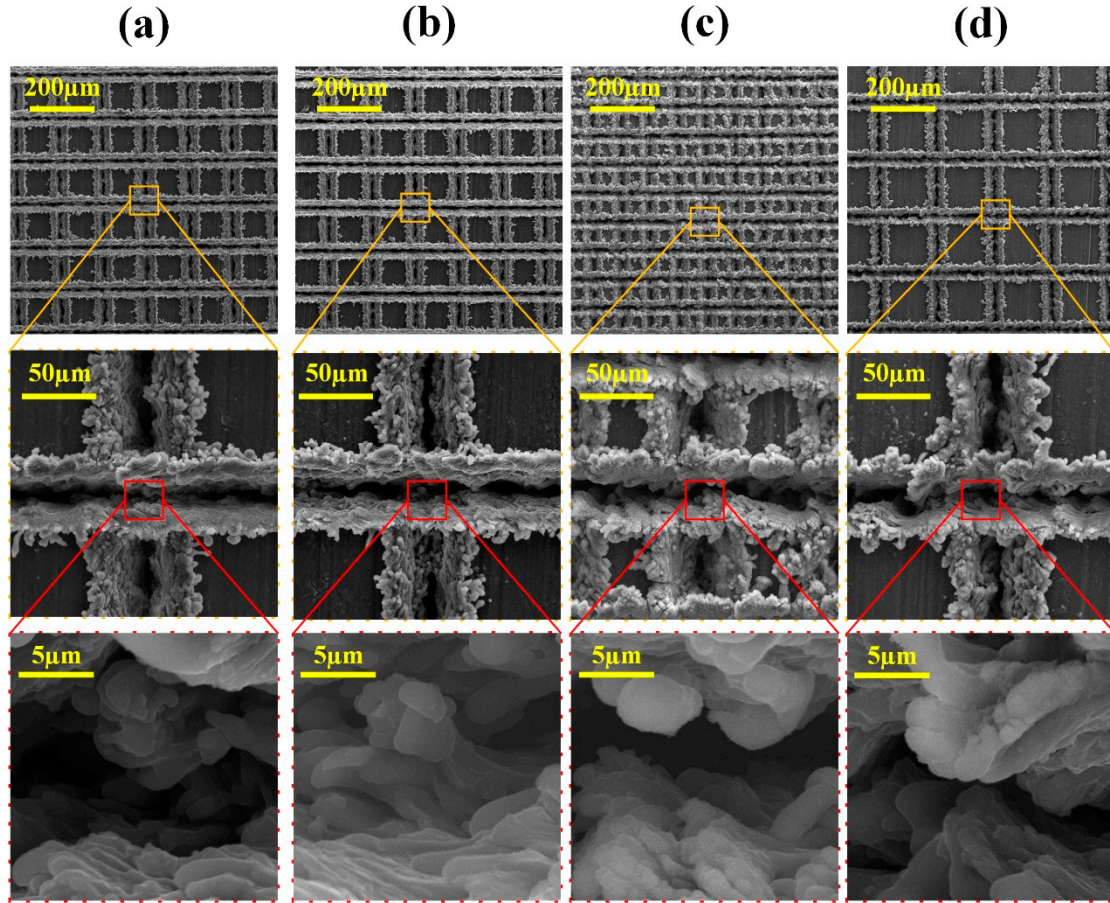


Figure S1. SEM micrographs of the laser structured Mg alloy surfaces processed by different laser processing parameters: (a) scanning speed of 50 mm/s and step size of 150 μm ; (b) scanning speed of 100 mm/s and step size of 150 μm ; (c) scanning speed of 20 mm/s and step size of 100 μm ; (d) scanning speed of 20 mm/s and step size of 200 μm .

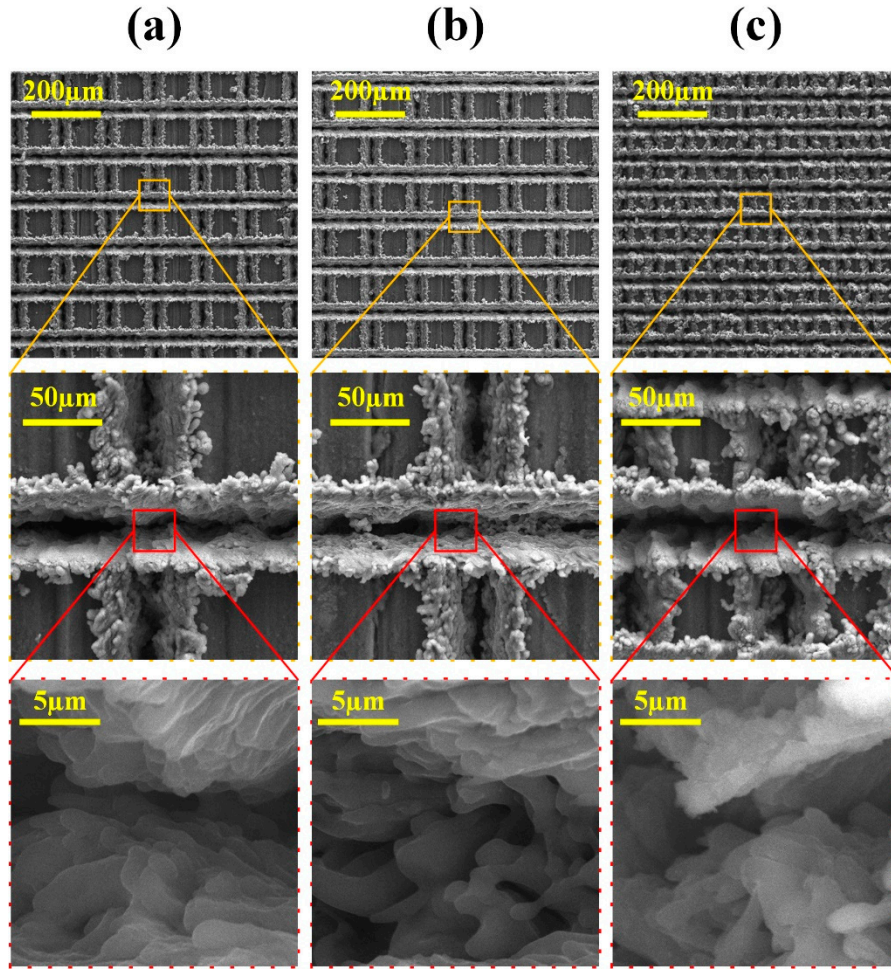


Figure S2. SEM micrographs of the laser-chemical treated Mg alloy surfaces processed by different laser processing parameters: (a) scanning speed of 50 mm/s and step size of 150 μm ; (b) scanning speed of 100 mm/s and step size of 150 μm ; (c) scanning speed of 20 mm/s and step size of 100 μm .

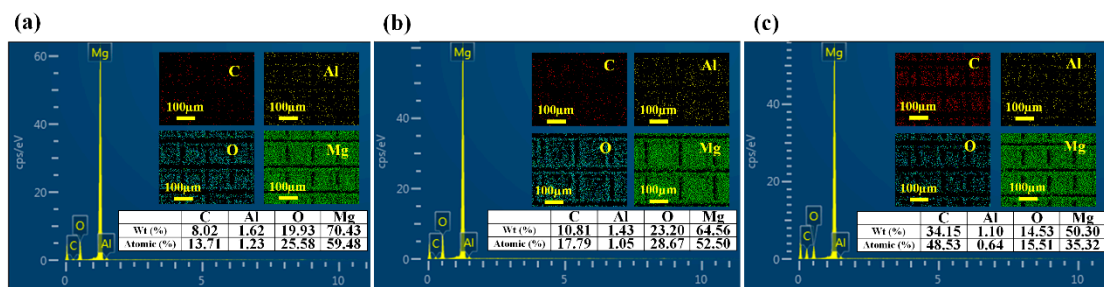


Figure S3. EDS spectra for (a) laser structured Mg alloy surfaces processed with a scanning speed of 100 mm/s and step size of 150 μm ; (b) laser-chemical treated Mg alloy surface processed with a scanning speed of 20 mm/s and step size of 200 μm ; (c) laser-chemical treated Mg alloy surface processed with a scanning speed of 100 mm/s and step size of 150 μm .