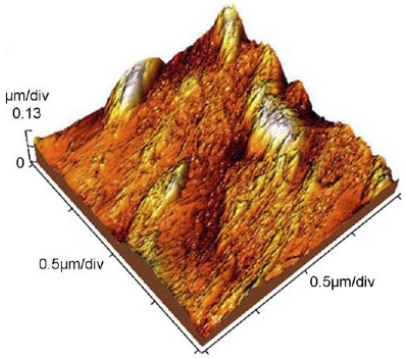


The effect of adding Fe_2O_3 on the bioactivity of cured ionomer cement was examined in simulated body fluid (SBF). Although the polyacrylic acid and Fe $_2O_3$ are known as inhibitors for apatite formation, results clearly show that exposure of the cement to the SBF lead to the formation of rough layers of carbonated-apatite (Volmer–Weber growth). Interestingly, the addition of Fe

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to the cement structure decreases the possibility of acid–base reaction in ionomer cements due to the improved chemical durability of the glass. Therefore, more calcium ions were released from the cement at the initial stage of soaking which plays an important role in forming the surface apatite layer by heterogeneous nucleation via the OH

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groups on the cement surface.