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(57) Abstract :

GALLIUM SILICON TITANIUM ALLOY AS BIOMATERIAL IMPLANT The present invention relates to Gallium Silicon Titanium (Ga-Si-Ti) alloy as biomaterial implant intended to be inserted into maxillofacial region. The alloy based biomaterial implant, consisting of Gallium-15 to 25 atomic%; Silicon-3 to 5 atomic%; and Titanium-75 to 80 atomic%, said Gallium Silicon Titanium alloy is in metal form. The Gallium Silicon Titanium (Ga-Si-Ti) alloy based biomaterial implant prevents osteoclastic activity, promotes osteoblastic activity and osseointegration. The Gallium silicon titanium alloy is in vitro is non corrosive, non toxic and biocompatible. The Gallium Silicon Titanium (Ga-Si-Ti) alloy based biomaterial implant improves bone formation and decrease the stress shield phenomenon (resorption).

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