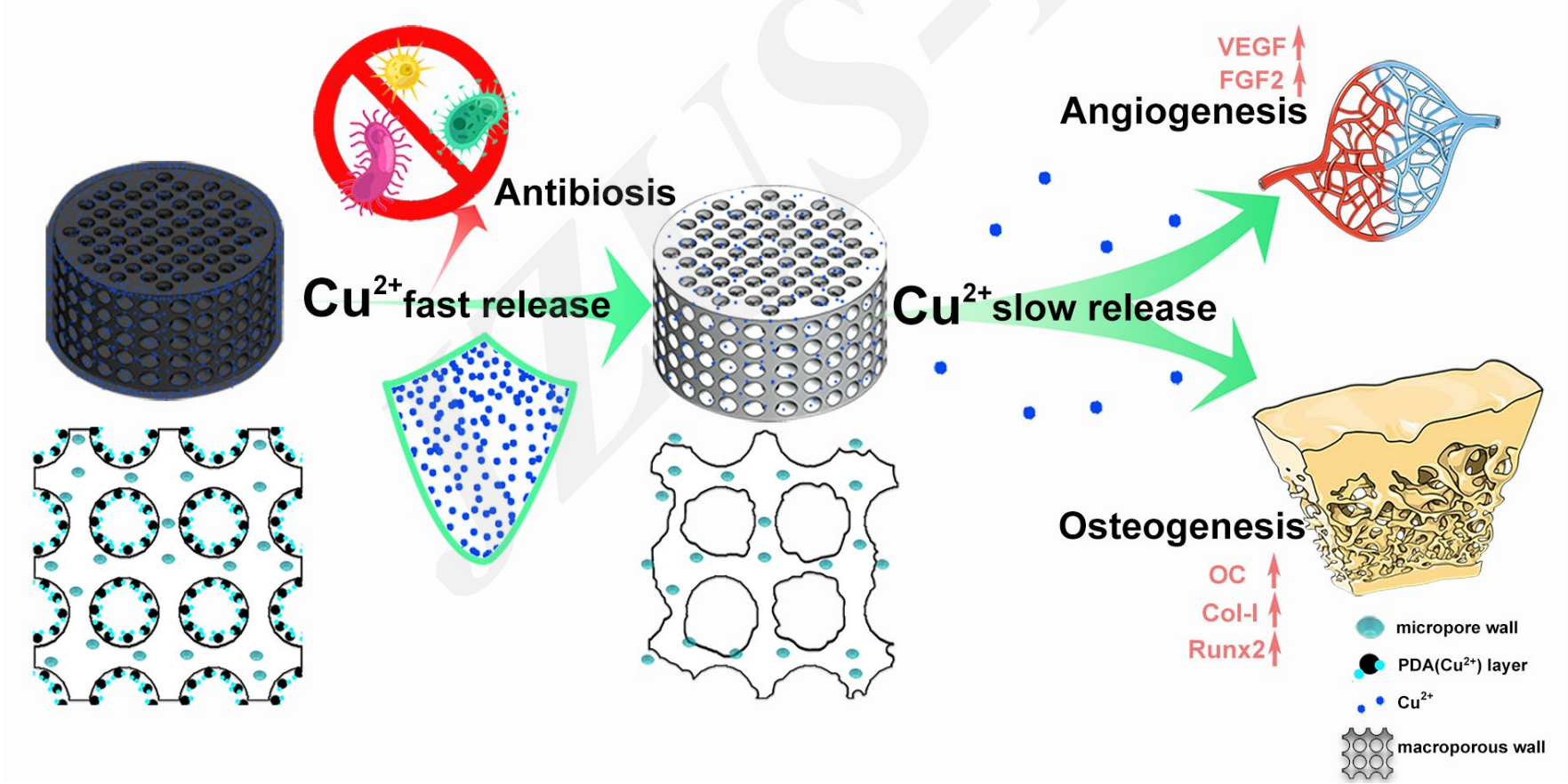
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Bioceramic scaffolds with two-step internal/external modification of copper-containing polydopamine enhance antibacterial and alveolar bone regeneration capability

Key words: Polydopamine (Cu^{2+}) modification, Antibacterial properties, Bone regeneration, Angiogenesis, Bioceramic scaffolds

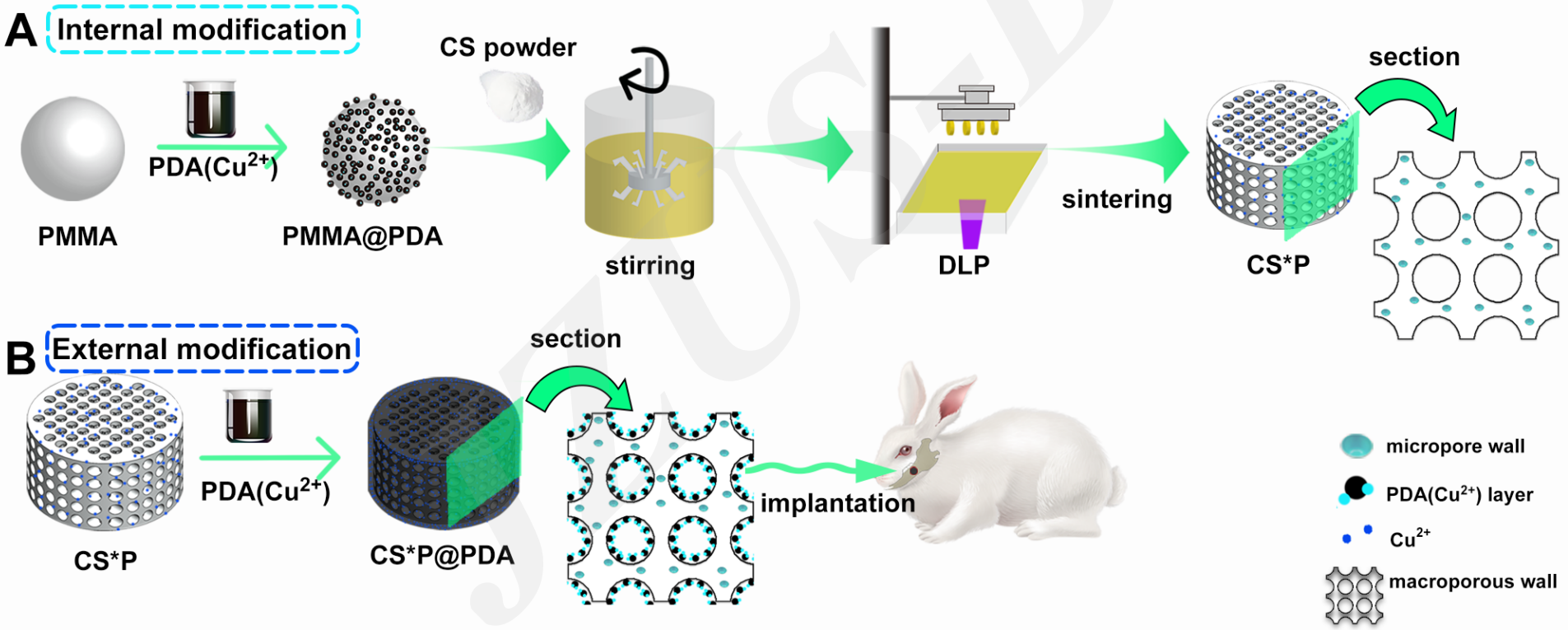
Research Summary

This study proposes a strategy of modifying bioceramic scaffolds internally and externally using PDA(Cu^{2+}), which endows the scaffold with antibacterial ability and promotes bone regeneration.



Research Summary

The two-step polydopamine (Cu^{2+}) modification strategy



Innovation points

- **A rapid polydopamine polymerization method is first applied as a modification of the bioceramic scaffold.**

- **A novel two-step polydopamine (Cu^{2+}) modification strategy for the bioceramic scaffold is proposed.**

- **The modified scaffolds with antibacterial, angiogenic and osteogenic functions meet the requirements of different bone repair stages.**