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**LaTorre et al.**

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(54) **COMPOSITIONS AND METHODS FOR TREATING NAILS AND ADJACENT TISSUES**

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(52) **U.S. Cl.** ..... **424/447**; 424/405; 424/443; 424/445; 424/446; 424/61; 514/722.4

(58) **Field of Search** ..... 424/61, 405, 443, 424/445, 446, 447; 514/722.4

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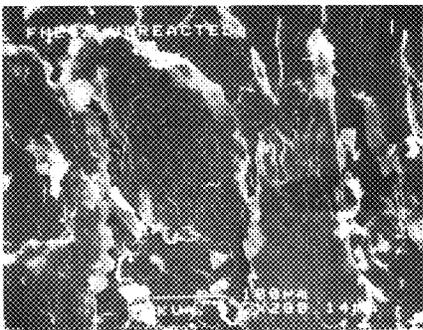
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(57) **ABSTRACT**

Compositions and methods for treating nails and adjacent tissues are disclosed. The compositions include non-interlinked particles of bioactive glass, alone or in combination with therapeutic agents, hydrophilic polymers, and other optional components. The compositions optionally include an appropriate aqueous carrier for topical administration. The methods involve applying an effective nail-enhancing amount of the composition to the nails and adjacent tissues for a sufficient amount of time to cause the formation of a hydroxyapatite or other calcium phosphate mineral layer on the nail surface.

**16 Claims, 4 Drawing Sheets**

Bioactive Glasses in Nail Care Applications  
Experiment #2(soak): SEM Analysis



Unreacted nail surface