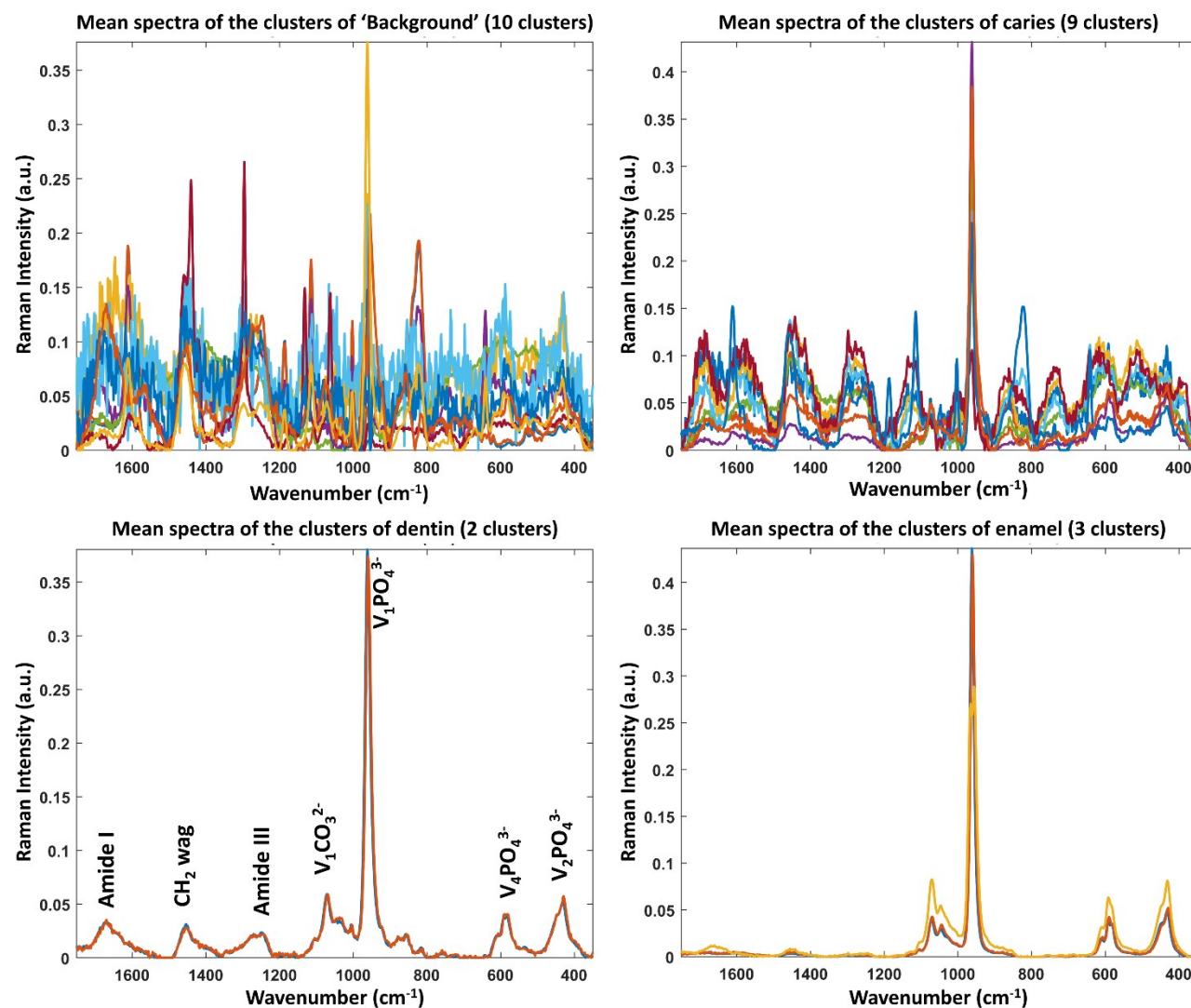
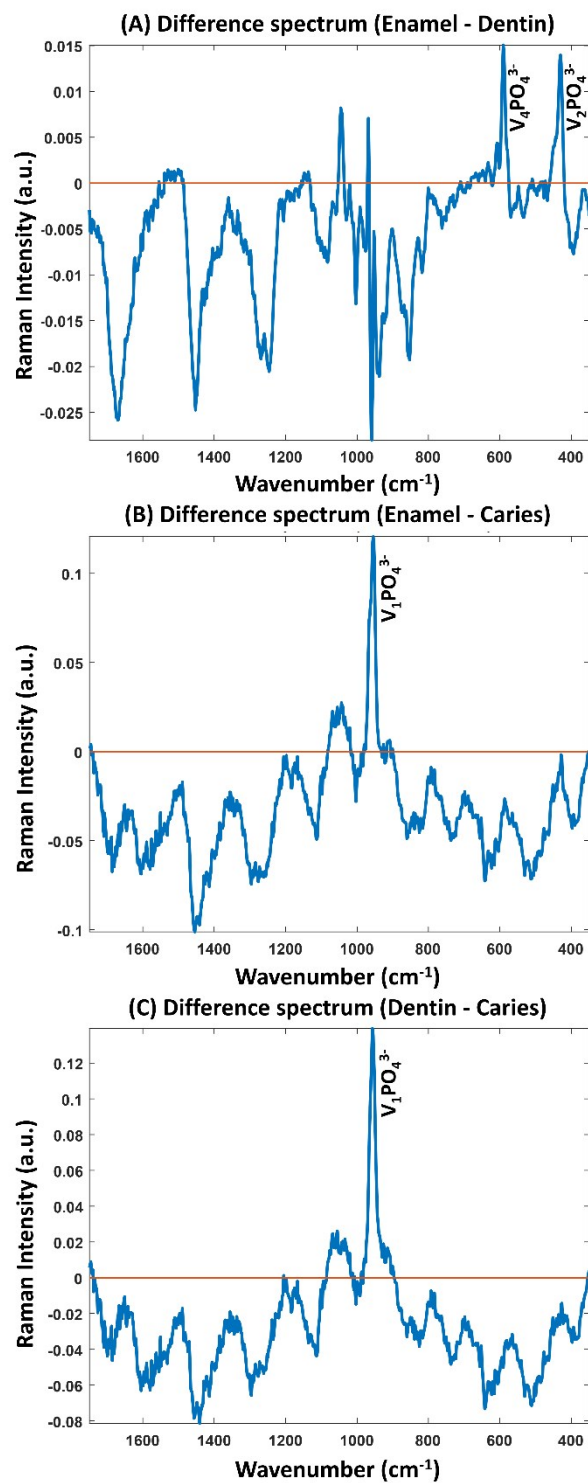


Mineralization of dental tissues and caries lesions detailed with Raman microspectroscopic imaging

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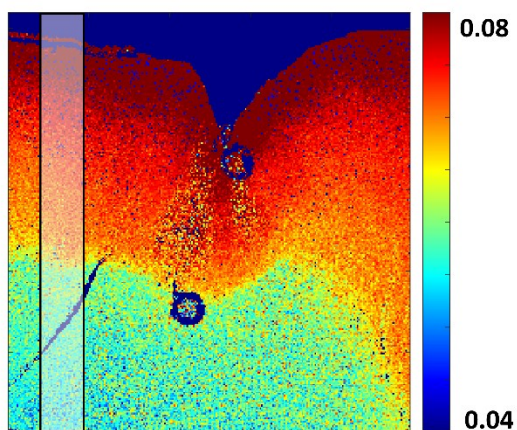


Supplementary Fig 1. Mean spectra of clusters. From twenty-four clusters, ten clusters were identified as background, another nine clusters were identified as dental caries, two clusters as dentin, and three clusters as enamel tissue. Major peaks are annotated on the dentin representative spectra.

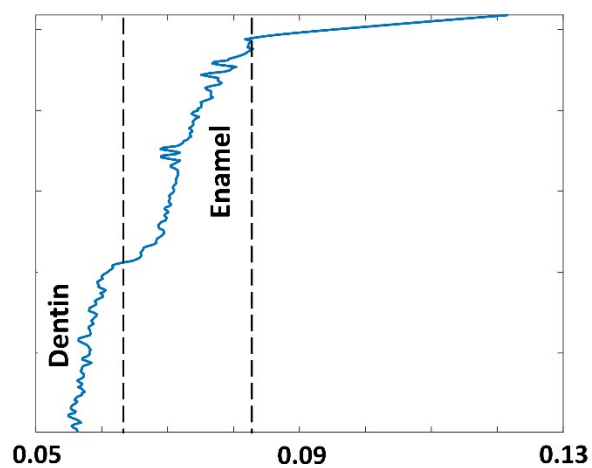


Supplementary Fig 2. Difference spectrum between (A) enamel and dentin, (B) enamel and caries, and (C) dentin and caries. Major mineral peaks are annotated.

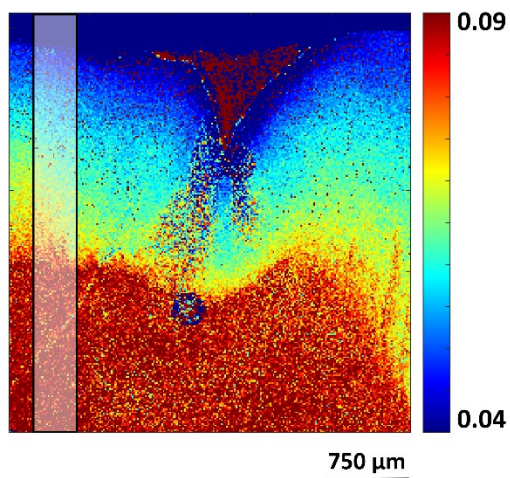
Mineral crystallinity



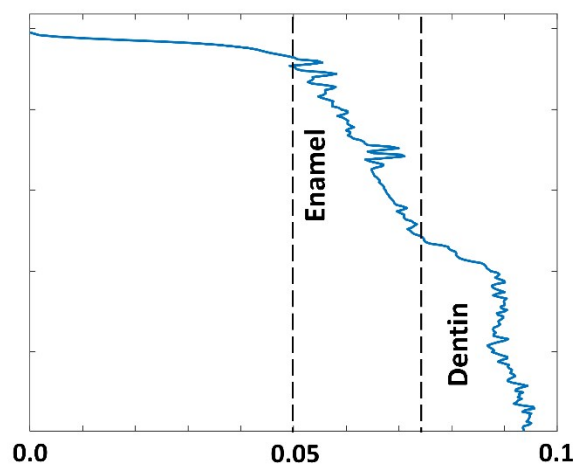
Depth-wise profile



Type-B carbonate substitution



Depth-wise profile



Supplementary Fig 3. Gradient profiles of the mineral crystallinity and carbonate substitution in crystal lattice