Imaging isotopically labeled bacteria at the single cell level using high-resolution optical infrared photothermal spectroscopy

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Figure S1   (A) PCA scores plot of preprocessed O-PTIR spectra acquired from a substrate containing a mixture of *E. coli* cells grown on $^{12}C/^{13}C$-glucose and/or $^{14}N/^{15}N$-ammonium chloride; each point is a spectrum from a single bacterium; values on the axes in parentheses are the percent total explained variance (TEV) by each PC. (B) PCA loadings plot of the O-PTIR spectral data with PC-1 (dashed line) and PC-2 (full line) showing the major peaks affected by the labelling process. (C) Comparison of loadings related to PC-1 and PC-2 obtained for spectra recorded in two configurations. Dashed lines represent spectral data acquired from each condition spotted into four different CaF_2 substrates; full lines relate to data collected from labelled and unlabelled cells on the same substrate. The plots are offset for clarity.

Figure S2   Single-point O-PTIR spectra acquired from single bacterial cells numbered 1-6 on Figure 4A, in which from inspection of the amide I and II positions we identified one unlabeled bacterium (cell 2, blue line); one ^{13}C-labeled bacterium (cell 5, red line), three cells grown on ^{15}N-ammonium chloride (cells 3, 4, 6, yellow lines), and one cell cultivated on both compounds (cell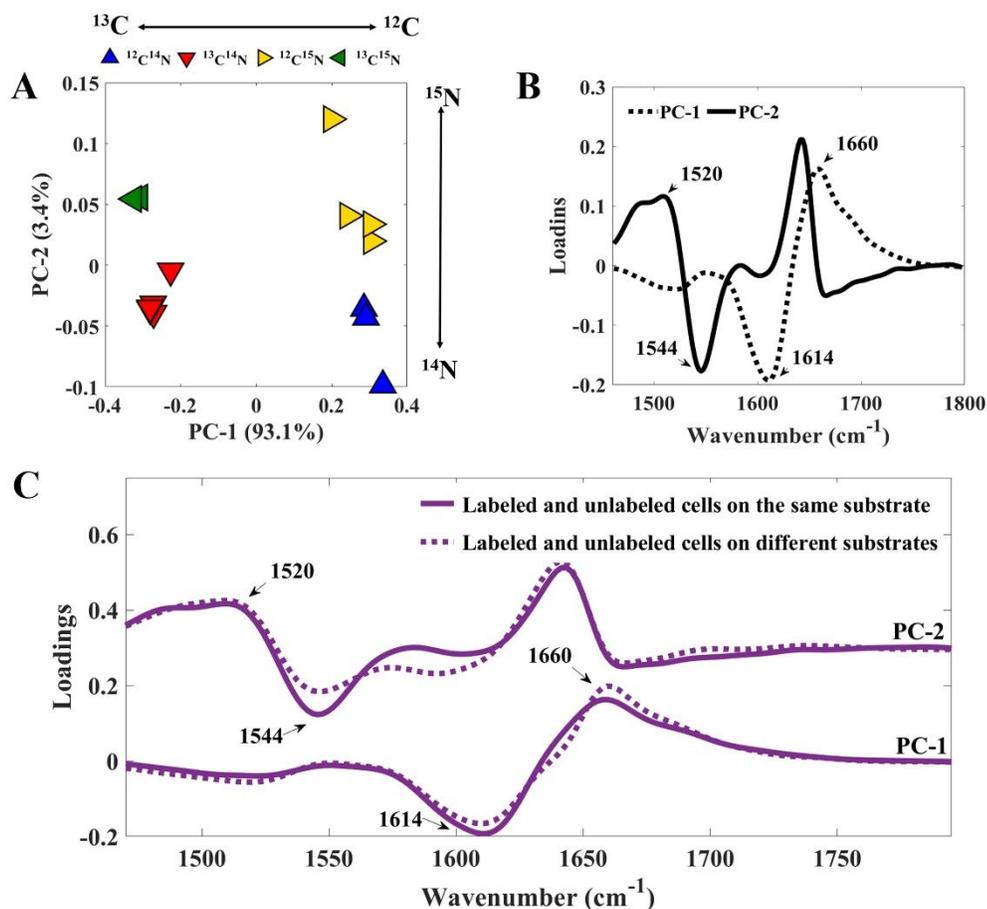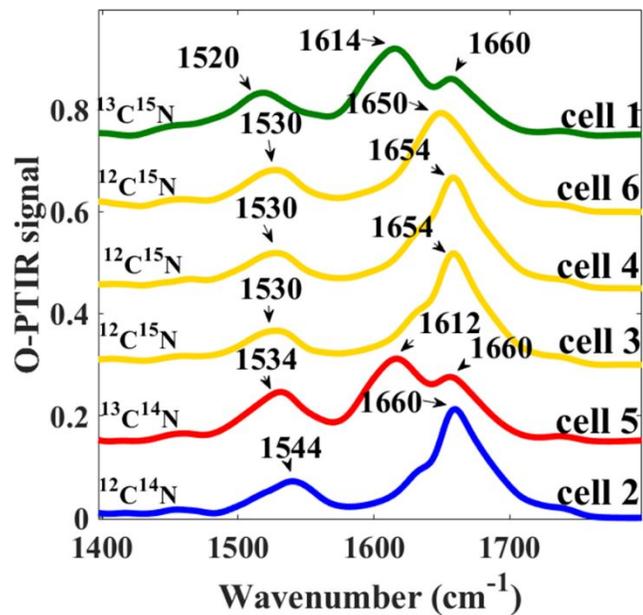 1, green line). The plots are offset for clarity.