



**FIGURE 1**. One selected representative high resolution C1s spectrum from each set of NAP-and cryo-XP spectra of *Pseudomonas fluorescens* acquired under NAP (**A**) and cryo (**B**) conditions. The binding energy scales were corrected for surface charging with respect to the C1s component peak of aliphatic carbon at 285.0 eV (ISO 19318:2004). The two spectra (**A**, **B**) were analyzed by peak fitting. C1 represents aliphatic carbon at binding energy 285.0 eV, C2 carbon in C-O or C-N bonds at 286.4 eV, C3 carbon in peptide bonds at 288.1 eV and C4 carbon in carboxyl groups at 289.1 eV. https://doi.org/10.3389/fchem.2021.666161