

| | Energy (eV) | Transition | Functional group | Cell | EPS | Filament |
|---|-------------|---|---|------|-----|----------|
| a | 285.1-285.2 | $1s \rightarrow \pi^*_{C=C}$ | unsaturated or aromatic C | y | y | y |
| b | 286 | $1s \rightarrow \pi^*$ | DNA | y | | y |
| c | 286.6-286.7 | $1s \rightarrow \pi^*$ | ketones, phenols, carbonyl (DNA) | y | | y |
| d | 287.4-287.6 | $1s \rightarrow \pi^*$ $1s \rightarrow \sigma^*$ | (DNA), aliphatic C, aromatic carbonyl, aromatic hydroxyl, other oxygenated groups | y | y | y |
| e | 288.2 | $1s \rightarrow \pi^*_{C=O}$ | amide carbonyl (peptide bond) | y | | y |
| f | 288.7 | $1s \rightarrow \pi^*_{C=O}$ | carboxyl (polysaccharide) | | y | |
| g | 289.4-289.5 | $1s \rightarrow \sigma^*$ $1s \rightarrow \pi^*$ | alcohol, aliphatic ether, carbonyl (DNA) | y | y | y |
| | 290.7 | $1s \rightarrow \pi^*_{C=O}$ | Carbonates | | | |
| | 297.4 | $2p_{3/2} \rightarrow 3d/\sigma^*$ | Potassium L ₃ | | | |
| | 299.9 | $2p_{1/2} \rightarrow 3d/\sigma^*$ | Potassium L ₂ | | | |