

### Oxidation States for the First 30 Elements (Most Common are X, Less Common are x)

|    | H | He | Li | Be | B | C | N | O | F | Ne | Na | Mg | Al | Si | P | S | Cl | Ar | K | Ca | Sc | Ti | V | Cr | Mn | Fe | Co | Ni | Cu | Zn |
|----|---|----|----|----|---|---|---|---|---|----|----|----|----|----|---|---|----|----|---|----|----|----|---|----|----|----|----|----|----|----|
| +7 |   |    |    |    |   |   |   |   |   |    |    |    |    |    |   |   | X  |    |   |    |    |    |   |    | X  |    |    |    |    |    |
| +6 |   |    |    |    |   |   |   |   |   |    |    |    |    |    |   | X |    |    |   |    |    |    |   |    | X  | x  | x  |    |    |    |
| +5 |   |    |    |    |   |   | X |   |   |    |    |    |    |    | X |   | X  |    |   |    |    |    |   | x  | x  | x  |    | x  |    |    |
| +4 |   |    |    |    |   | X | x |   |   |    |    |    |    | X  |   | X |    |    |   |    |    |    | X | X  | x  | x  | x  | x  | x  |    |
| +3 |   |    |    |    | X |   | X |   |   |    |    |    | X  |    | X |   | X  |    |   |    |    | X  | x | X  | X  | X  | X  | X  | x  | x  |
| +2 |   |    |    | X  |   | X | x |   |   |    |    | X  |    |    |   | X |    |    |   |    | X  | x  | x | x  | X  | X  | X  | X  | X  | X  |
| +1 | X |    | X  |    |   |   | X |   |   |    | X  |    |    |    |   |   | X  |    | X |    |    |    |   | x  | x  | x  | x  | x  | x  | X  |
| 0  | X | X  | X  | X  | X | X | X | X | X | X  | X  | X  | X  | X  | X | X | X  | X  | X | X  | X  | X  | X | X  | X  | X  | X  | X  | X  | X  |
| -1 | X |    |    |    |   |   | x | x | X |    |    |    |    |    |   |   | X  |    |   |    |    |    | x | x  | x  | x  |    | x  | x  |    |
| -2 |   |    |    |    |   |   | x | X |   |    |    |    |    |    |   | X |    |    |   |    |    |    |   |    | x  | x  | x  |    |    |    |
| -3 |   |    |    |    |   |   | X |   |   |    |    |    |    |    | X |   |    |    |   |    |    |    |   | x  |    | x  |    | x  |    |    |
| -4 |   |    |    |    |   | X |   |   |   |    |    |    |    | X  |   |   |    |    |   |    |    |    |   |    | x  |    |    |    |    |    |