

solvation energy

The change in Gibbs energy when an ion or molecule is transferred from a vacuum (or the gas phase) to a solvent. The main contributions to the solvation energy come from:

1. the cavitation energy of formation of the hole which preserves the dissolved species in the solvent;
2. the orientation energy of partial orientation of the dipoles;
3. the isotropic interaction energy of electrostatic and dispersion origin; and
4. the anisotropic energy of specific interactions, *e.g.* hydrogen bonds, donor-acceptor interactions *etc.*

Source:

PAC, 1999, 71, 1919 (*Glossary of terms used in theoretical organic chemistry*) on page 1962