

The solvent effects on dimethyl phthalate investigated by FTIR characterization, solvent parameter correlation and DFT computation

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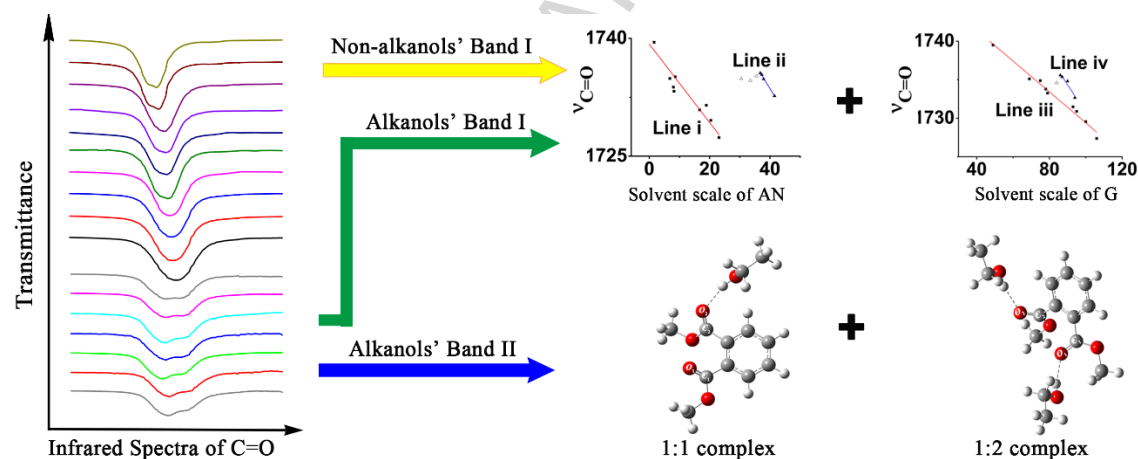
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Graphical Abstract:



Highlights:

1. Band I of $\nu_{C=O}$ involve non-specific effects from non-alkanol molecules and alkanol polymers.
2. Alkanol molecules self-associate into what contain shielded polar moieties resulting in screening effects.
3. Hydrophobic interactions serve to reinforce the screening effects.
4. Two C=O groups adopting different conformations induce different spectral response.

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