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Authors: Darya L. Gurina, Marina L. Antipova, Ekaterina G. Odintsova, Valentina E. Petrenko



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**SELECTIVE SOLVATION IN COSOLVENT-MODIFIED SUPERCRITICAL CARBON DIOXIDE ON THE EXAMPLE OF HYDROXYCINNAMIC ACIDS. THE ROLE OF COSOLVENT SELF-ASSOCIATION**

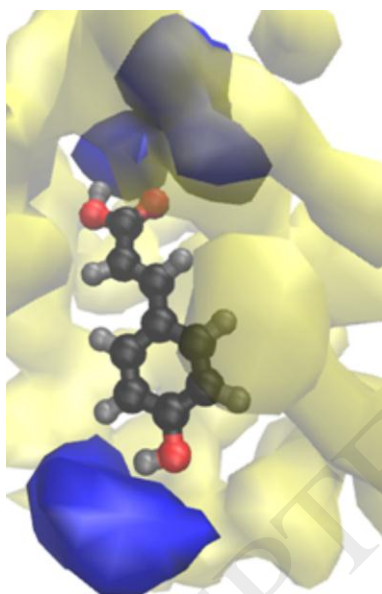
**Darya L. Gurina, Marina L. Antipova, Ekaterina G. Odintsova, Valentina E. Petrenko\***

G.A. Krestov Institute of Solution Chemistry of the Russian Academy of Sciences,

Akademicheskaya str., 1, Ivanovo, Russia, 153045

[vep@isc-ras.ru](mailto:vep@isc-ras.ru)

Graphical Abstract



**HIGHLIGHTS**

- Simulation of hydroxycinnamic acids in modified supercritical CO<sub>2</sub> was performed.
- Selective solvation occurs by the formation of hydrogen bonded complexes.
- Cosolvent forms clusters around the solvate complexes.
- The number of methanol molecules in such clusters can reach 10.
- Methanol associates consist of no more than three molecules in the fluid bulk.

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