SUPPLEMENTARY INFORMATION

Mechanistic insights into lignin dissolution behaviors of recyclable acid hydrotrope, deep eutectic solvent (DES), and ionic liquid (IL)

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Fig. S1. The $^{31}$P NMR spectra of the MWL and the lignin extracted by DES and $p$-TsOH aqueous solution.
Figure S2. The main noncovalent interactions between two VG dimers in solvent and the interaction energies (kcal/mol) as shown in parentheses.
Figure S3. The key structures for VG-solvent and the interaction energies (kcal/mol) as shown in parentheses.
Table S1. The zero-point energy (ZPE) corrections at the M06-2X/6-311G(d,p)-SMD level, electronic energies (E) and the basis set superposition error (BSSE) at the M06-2X/6-311+G(d,p)-SMD level for the key structures.\(^a\)

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\(^a\)All energies are given in Hartree.
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