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Controlled tautomerism – a switching caused by an "underground" anionic effect

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Contents:

1. Additional figures:

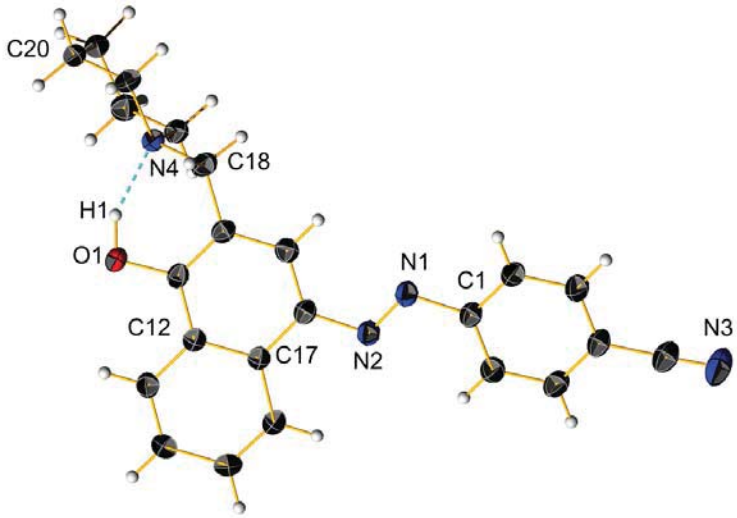

Figure S1. View of the molecular structure of the enol form of compound **3**, ellipsoids are drown with 50% probability. N atoms are in blue, O in red, C in black and H in white.

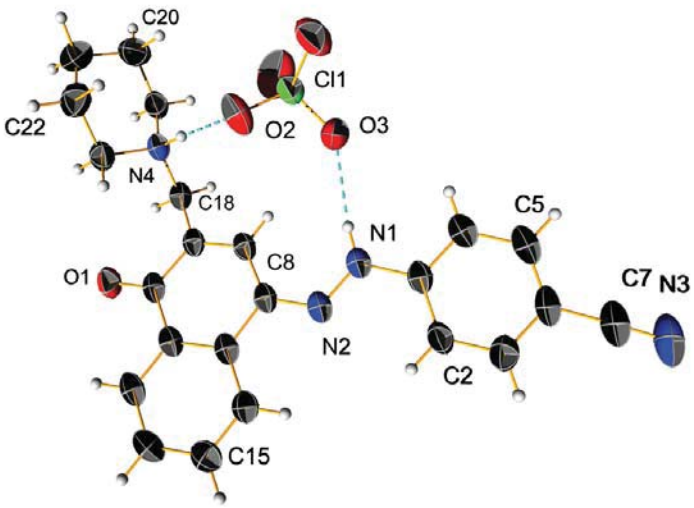

Figure S2. View of the molecular structure of the keto form of compound **3** with perchloric acid, ellipsoids are drown with 50% probability. N atoms are in blue, O in red, C in black, H in white and Cl in green.

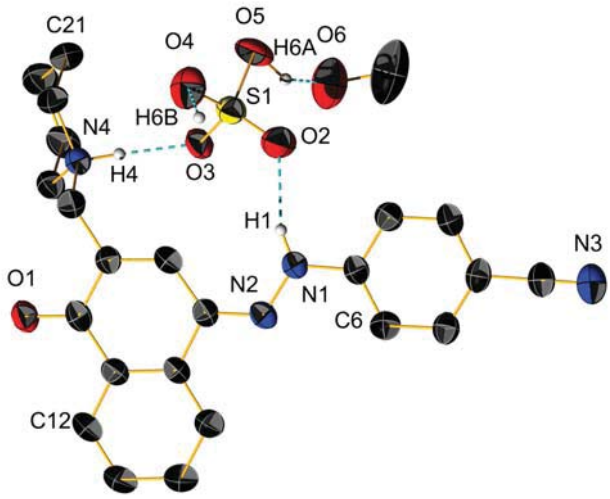

Figure S3. View of the molecular structure of the keto form of compound **3** with sulfuric acid. Ellipsoids are drown with 50% probability, some hydrogen atoms are omitted for clarity. N atoms are in blue, O in red, C in black, H in white and S in yellow.

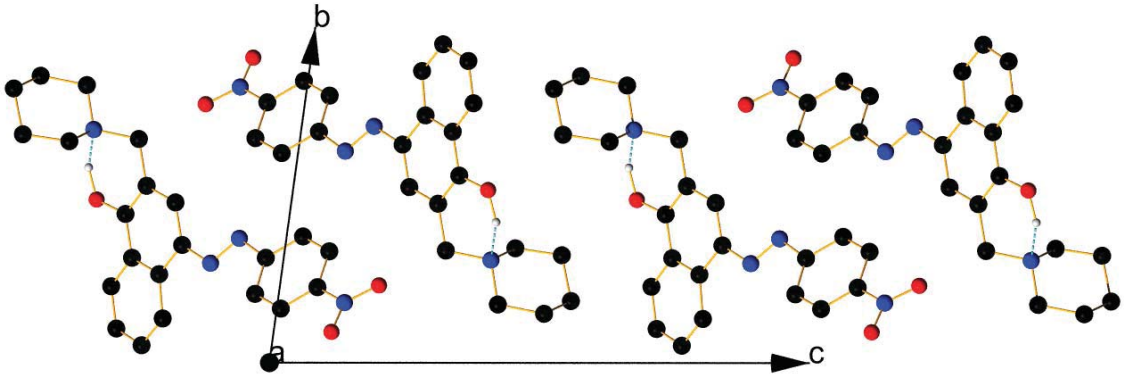

Figure S4. View of the packing along a axis in the enol form of compound **4**.

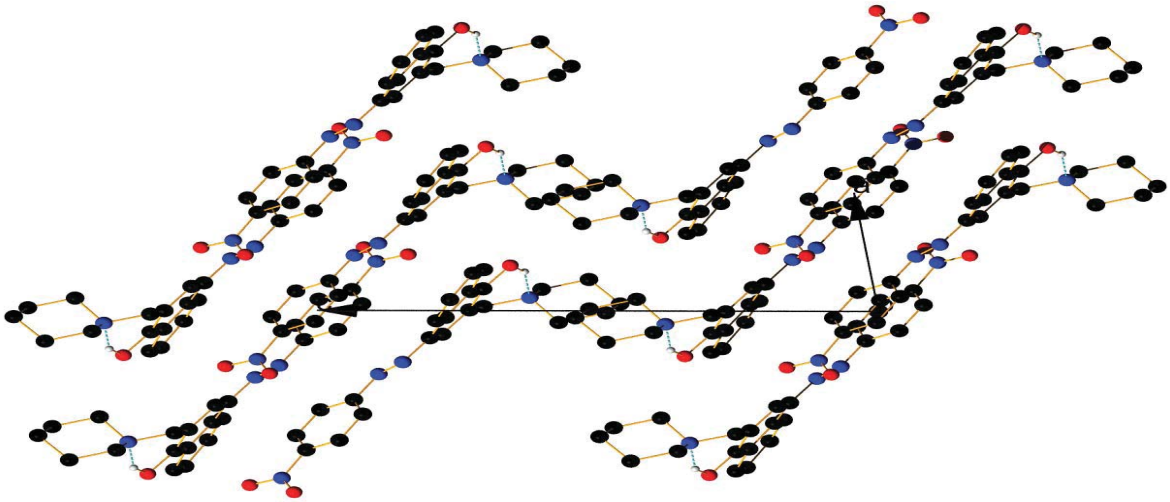

Figure S5. View of the packing along b axis in the enol form of compound **4**.

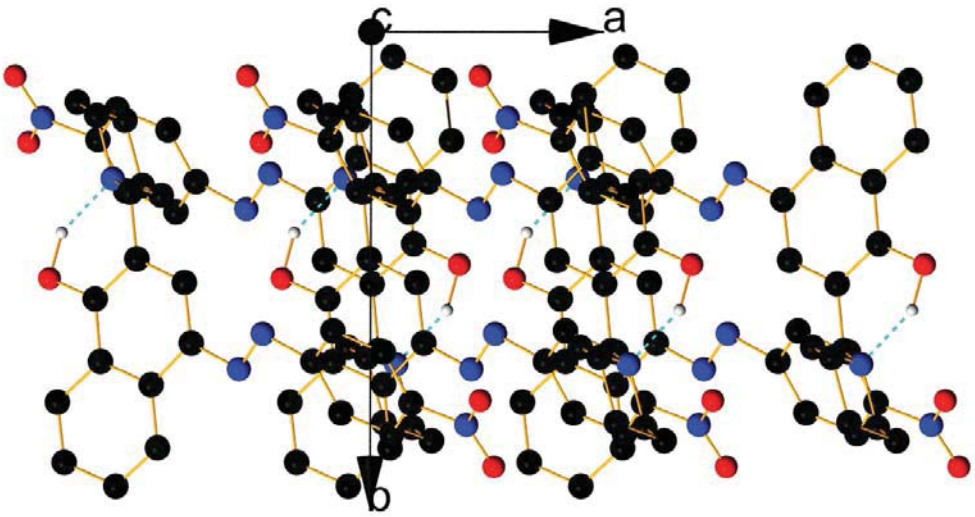

Figure S6. View of the packing along c axis in the enol form of compound **4**.

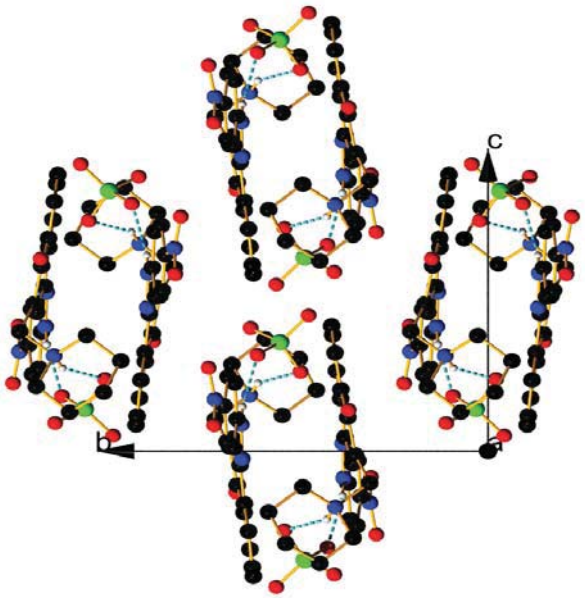

Figure S7. View of the packing along a axis in the keto form of compound **4** with perchloric acid.

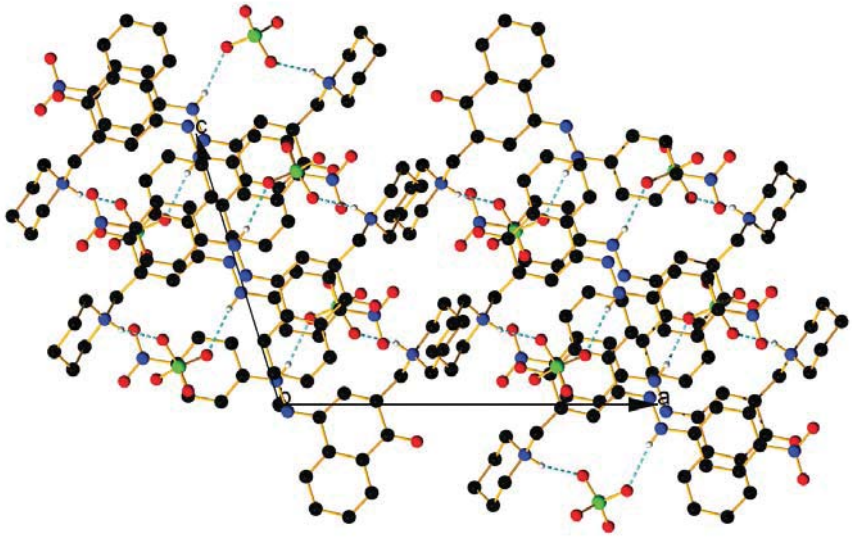

Figure S8. View of the packing along b axis in the keto form of compound **4** with perchloric acid.

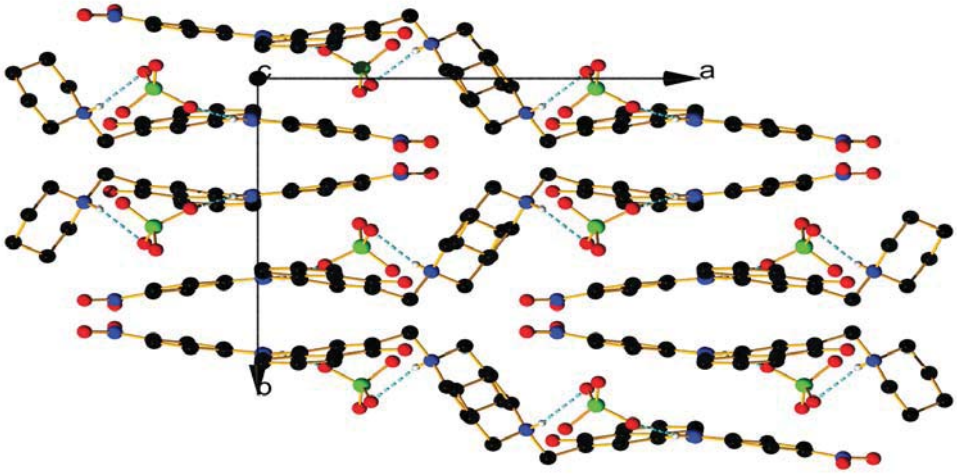

Figure S9. View of the packing along c axis in the keto form of compound **4** with perchloric acid.

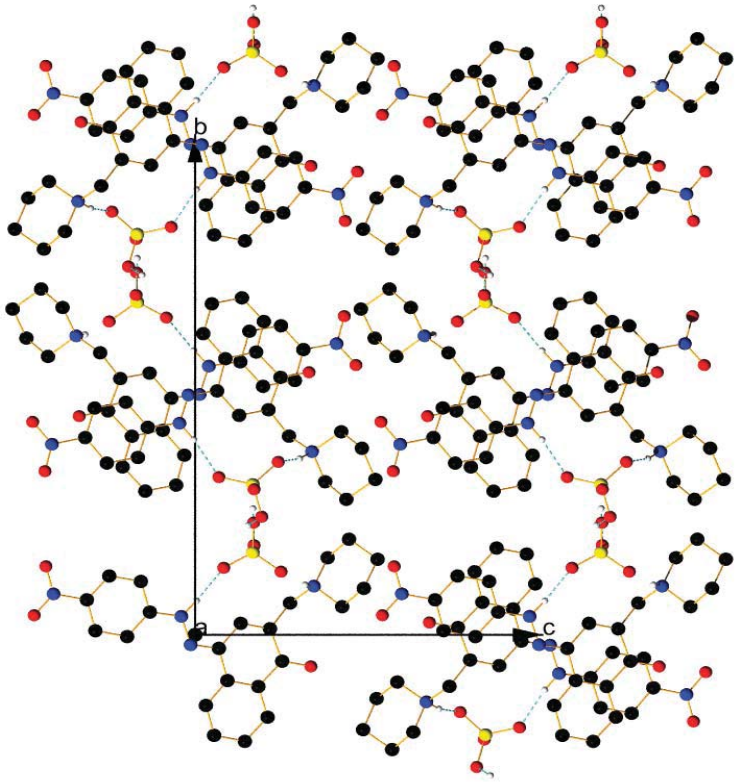

Figure S10. View of the packing along a axis in the keto form of compound **4** with sulfuric acid.

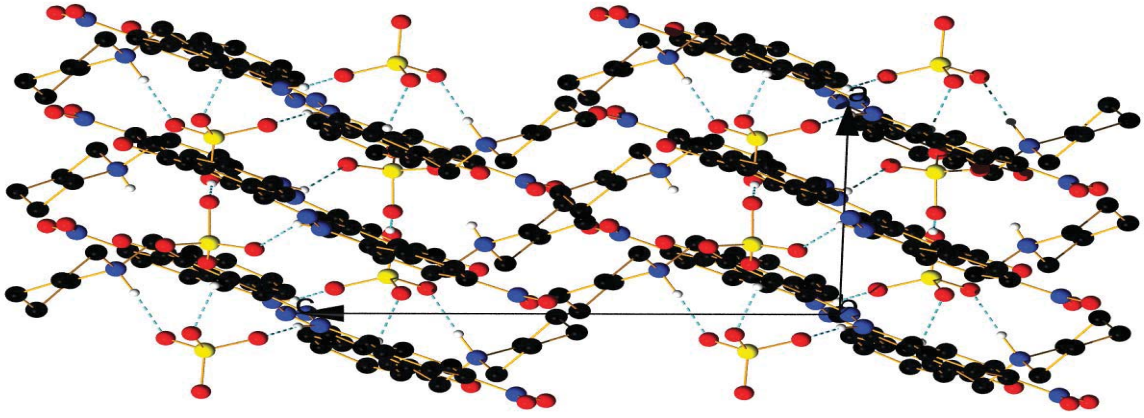

Figure S11. View of the packing along b axis in the keto form of compound **4** with sulfuric acid.

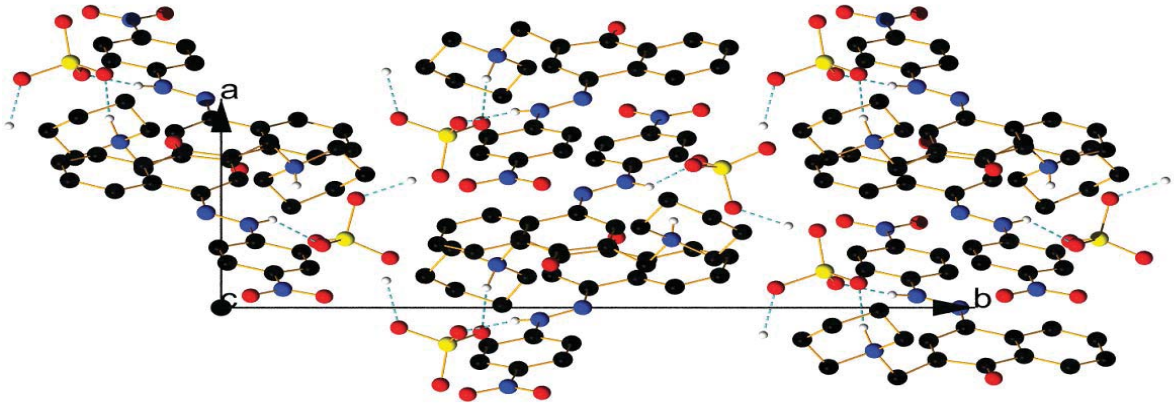

Figure S12. View of the packing along c axis in the keto form of compound **4** with sulfuric acid.

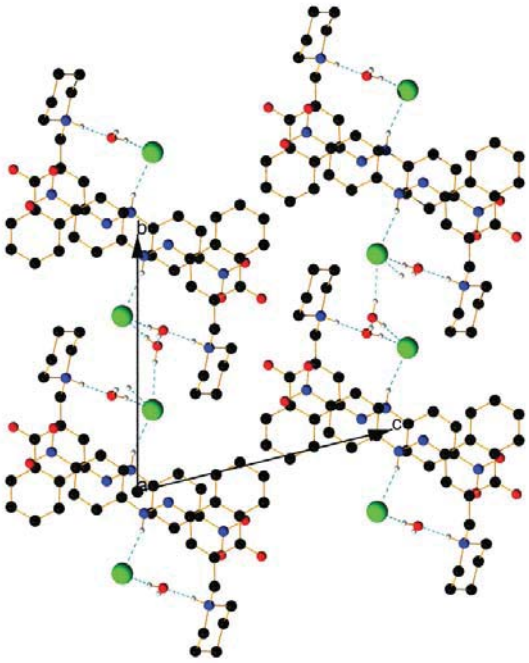

Figure S13. View of the packing along a axis in the keto form of compound **4** with hydrochloric acid.

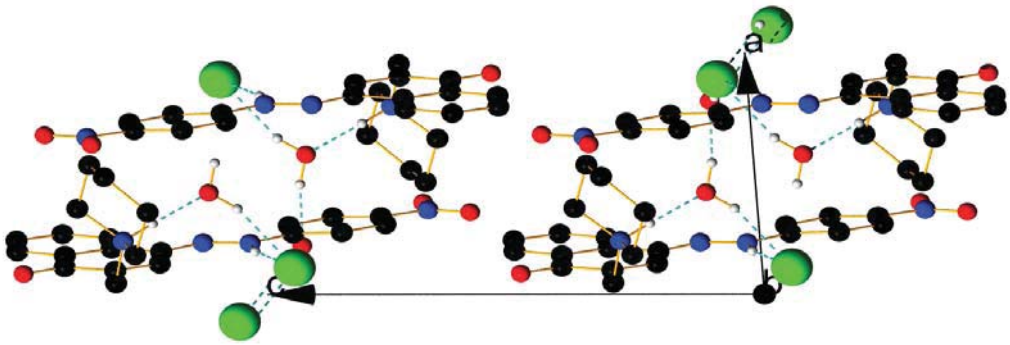

Figure S14. View of the packing along b axis in the keto form of compound **4** with hydrochloric acid.

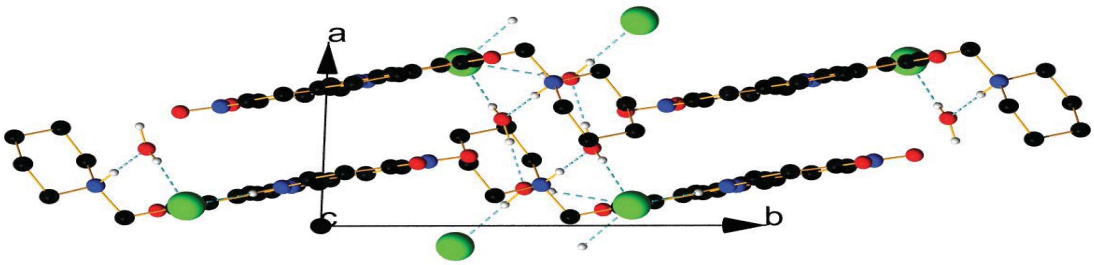

Figure S15. View of the packing along c axis in the keto form of compound **4** with hydrochloric acid.

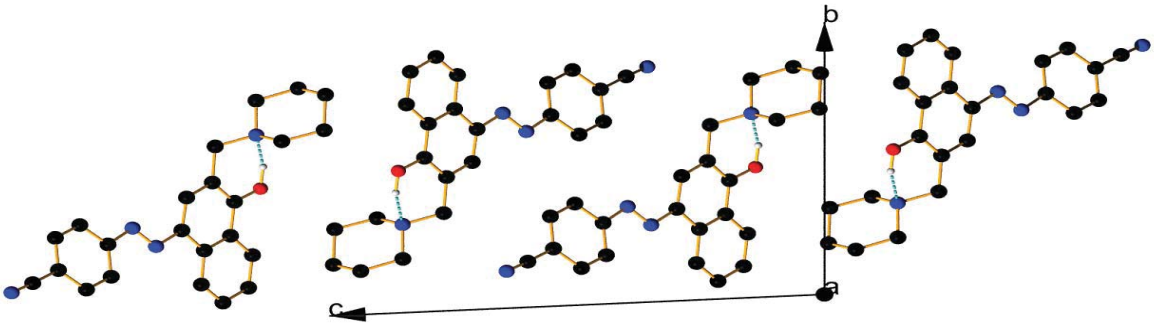

Figure S16. View of the packing along a axis in the enol form of compound **3**.

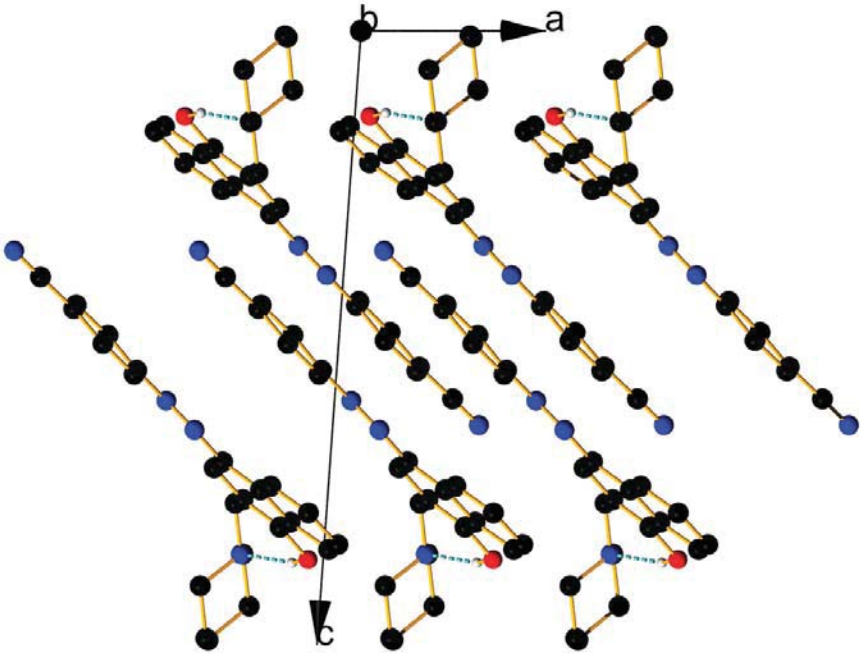

Figure S17. View of the packing along b axis in the enol form of compound **3**.

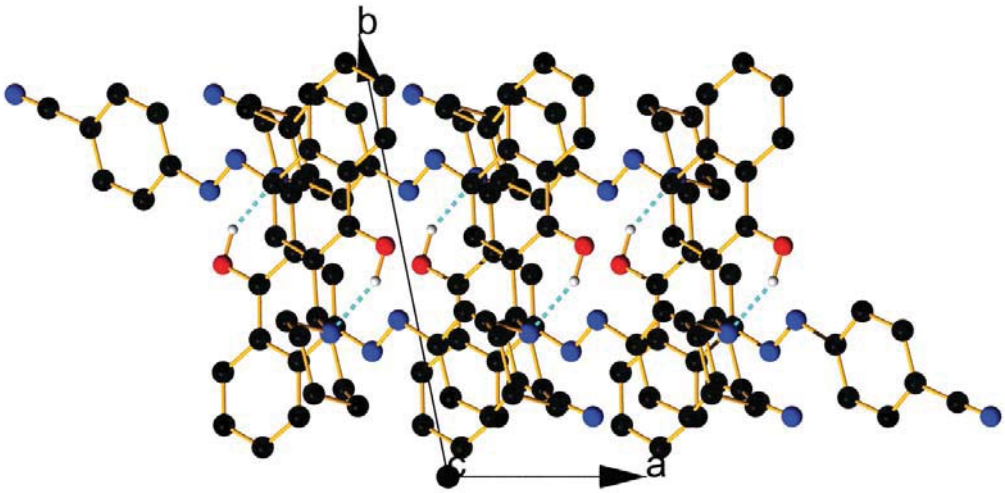

Figure S18. View of the packing along c axis in the enol form of compound **3**.

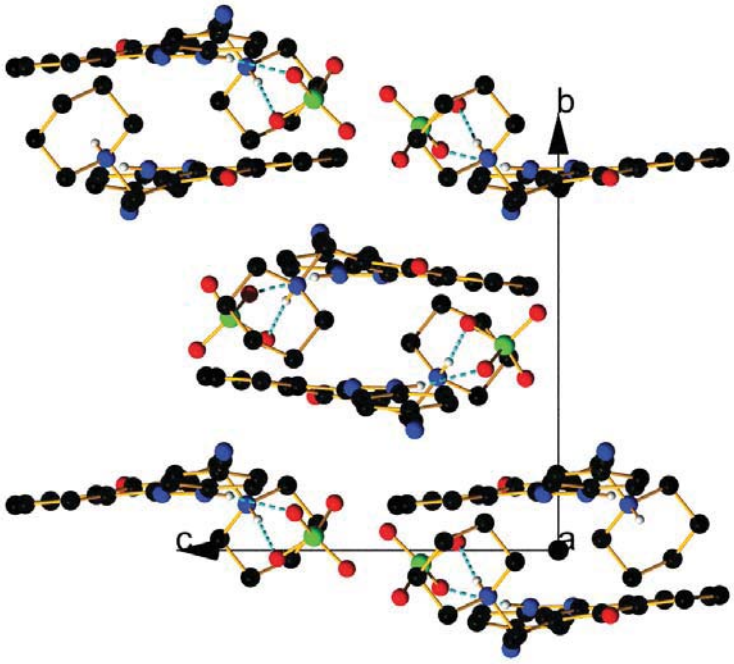

Figure S19. View of the packing along a axis in the keto form of compound **3** with perchloric acid.

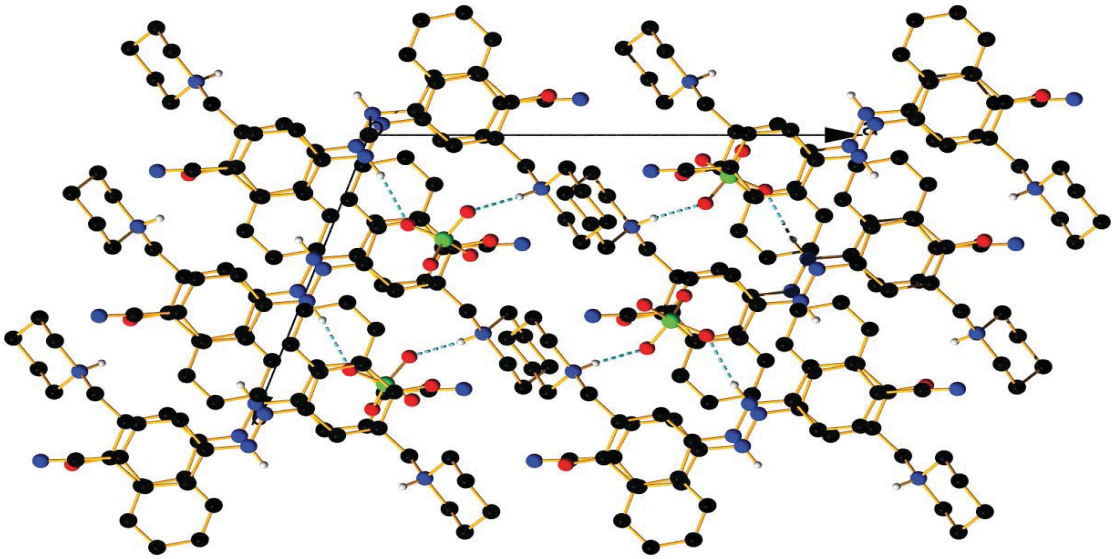

Figure S20. View of the packing along b axis in the keto form of compound **3** with perchloric acid.

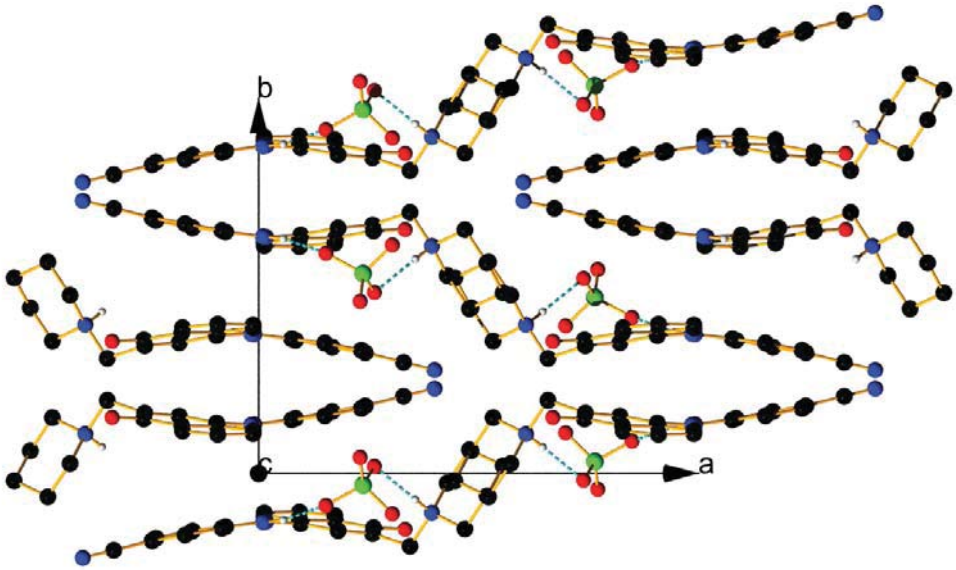

Figure S21. View of the packing along c axis in the keto form of compound **3** with perchloric acid.

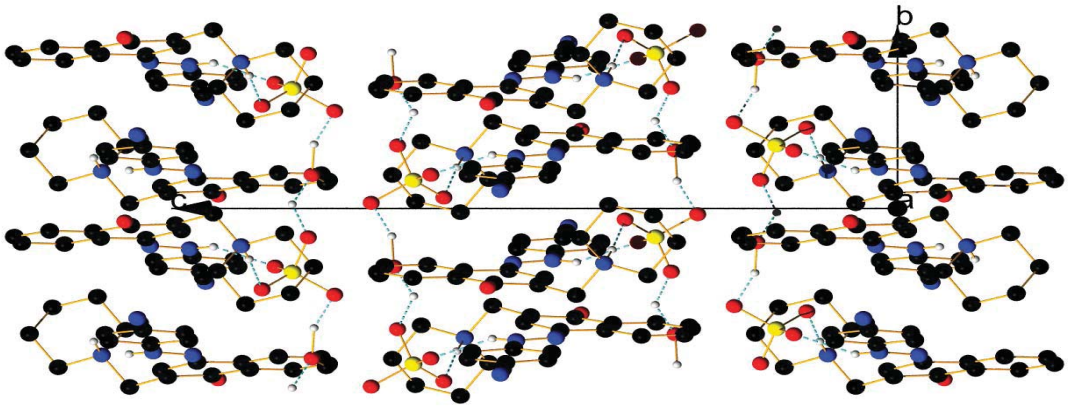

Figure S22. View of the packing along a axis in the keto form of compound **3** with sulfuric acid.

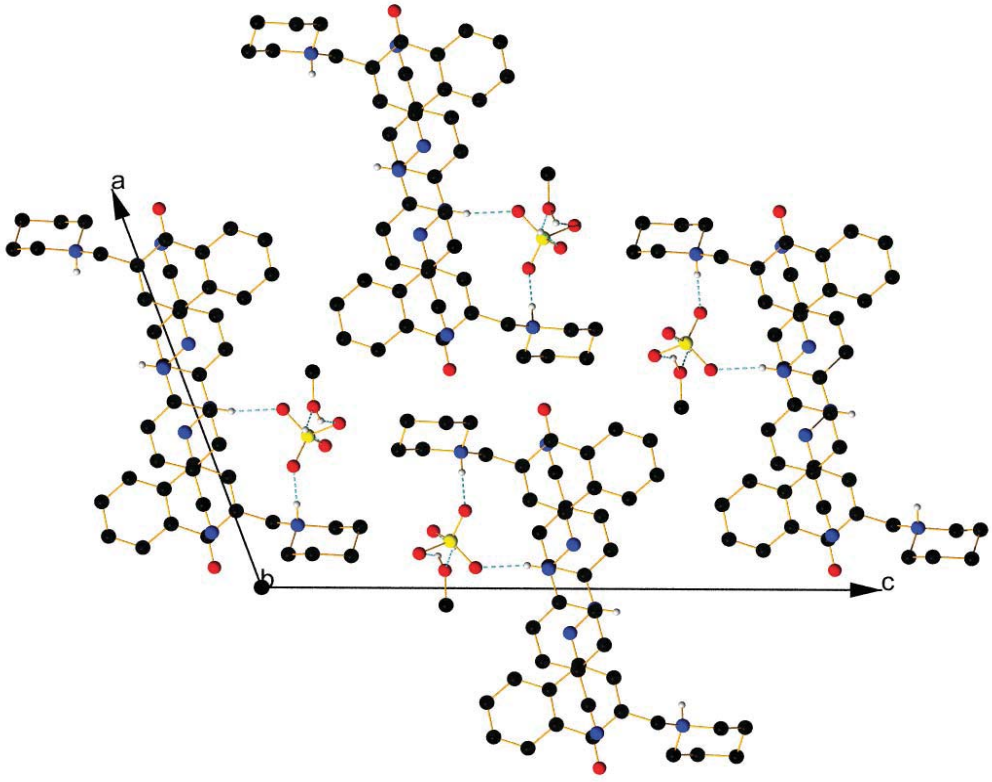

Figure S23. View of the packing along b axis in the keto form of compound **3** with sulfuric acid.

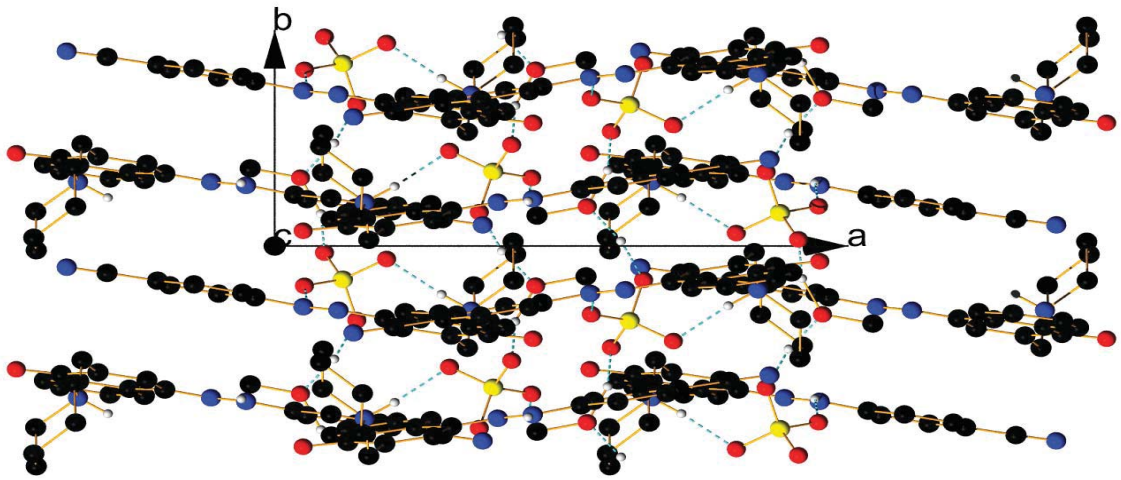

Figure S24. View of the packing along c axis in the keto form of compound **3** with sulfuric acid.

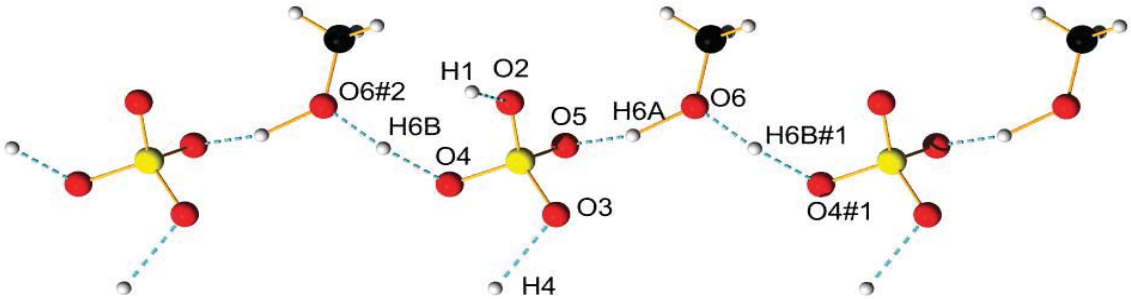

Figure S25. View of the counter anion chain in the packing of the keto form of compound **3** with sulfuric acid.

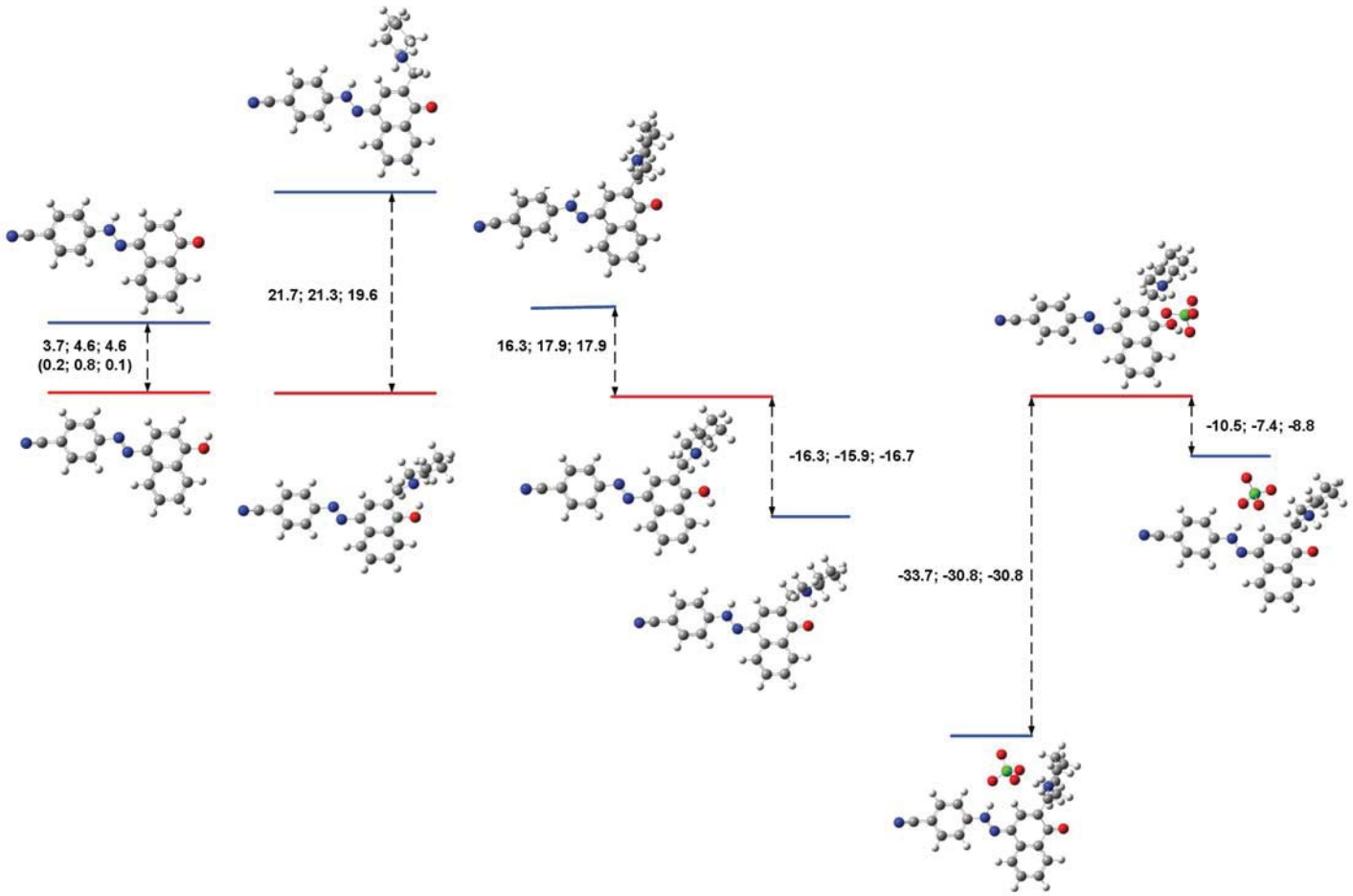

Figure S26. Change of the relative energy (M06-2X/def2TZVP) of the tautomers of the parent compound **1**, **3**, $\mathbf{3H^+}$ and $\mathbf{3H^+ClO_4^-}$. The values of ΔE, ΔE+ZPE and ΔΔG are given in kJ/mol units.

Crystal data can be obtained on quoting the depository numbers CCDC- 928932 (**3**), 928933 ($\mathbf{3H^+ClO_4^-}$), 928934 ($\mathbf{3H^+HSO_4^-}$) (Fax: +44-1223-336-033; E-Mail:deposit@ccdc.cam.ac.uk).