

Fig. 1S. Molecular orbitals of N3 (dft/b3lyp/cep-4g, isodensity value = 0.02).

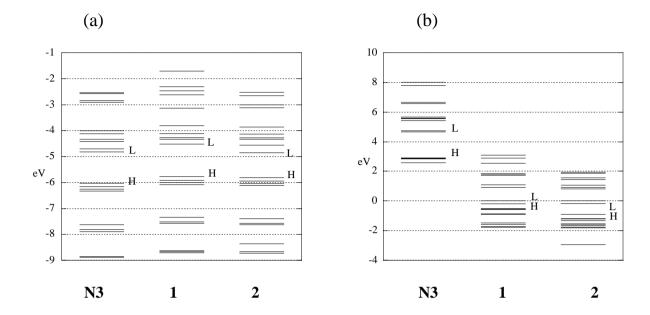
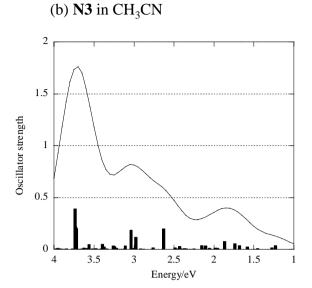


Fig. 2S. Energy levels (eV) of N3, 1, and 2 (a) and deprotonated N3, 1, and 2 in vacuo (b) Abbreviations: L, LUMO; H, HOMO.

(a) N3 in vacuo 1.2 1 0.8 0.6 0.4 0.2 0.4 3.5 3 2.5 2 1.5



(c) Deprotonated N3 in vacuo

Energy/eV

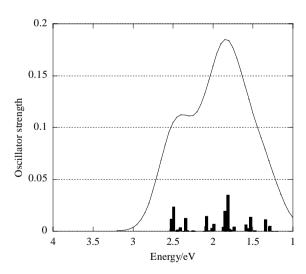
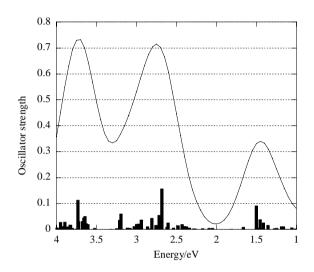
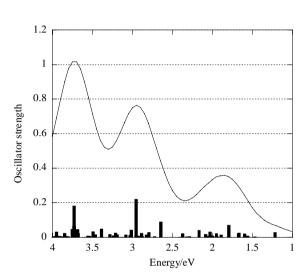


Fig. 3S. Calculated electronic spectra of N3: (a) N3 in vacuo, (b) N3 in CH₃CN, (c) deprotonated N3 in vacuo. Vertical lines correspond to calculated excitation energies and oscillator strengths. The calculated spectra have been obtained by a gaussian convolution with σ =0.20 and 0.1eV for the transitions below and above 4.0 eV, respectively.

(a) 1 in vacuo



(b) 1 in CH₃CN



(c) Deprotonated 1 in vacuo

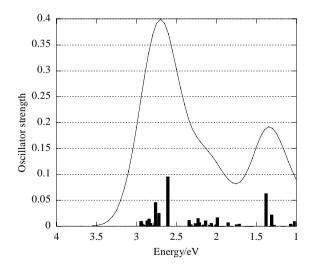
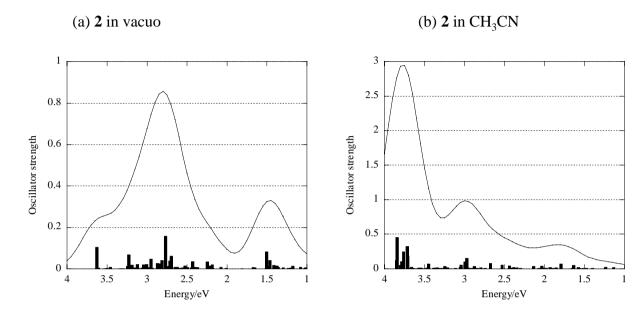


Fig. 4S. Calculated electronic spectra of 1: (a) 1 in vacuo, (b) 1 in CH_3CN , (c) deprotonated 1 in vacuo. Vertical lines correspond to calculated excitation energies and oscillator strengths. The calculated spectra have been obtained by a gaussian convolution with σ =0.20 and 0.1eV for the transitions below and above 4.0 eV, respectively.



(c) Deprotonated 2 in vacuo

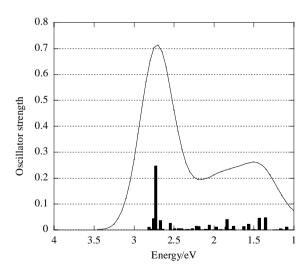


Fig. 5S. Calculated electronic spectra of 2: (a) 2 in vacuo, (b) 2 in CH_3CN , (c) deprotonated 2 in vacuo. Vertical lines correspond to calculated excitation energies and oscillator strengths. The calculated spectra have been obtained by a gaussian convolution with σ =0.20 and 0.1eV for the transitions below and above 4.0 eV, respectively.