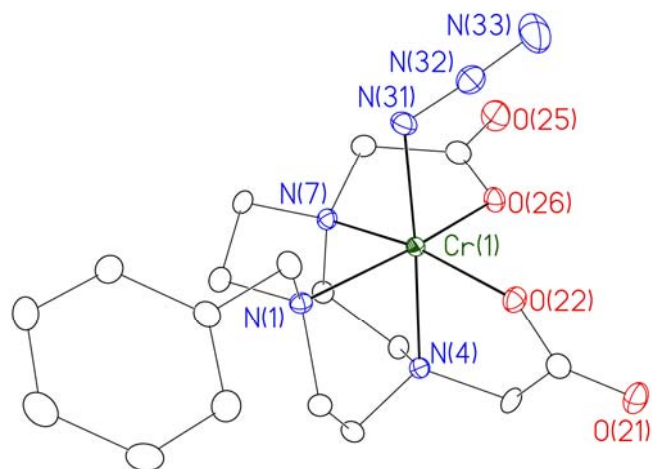


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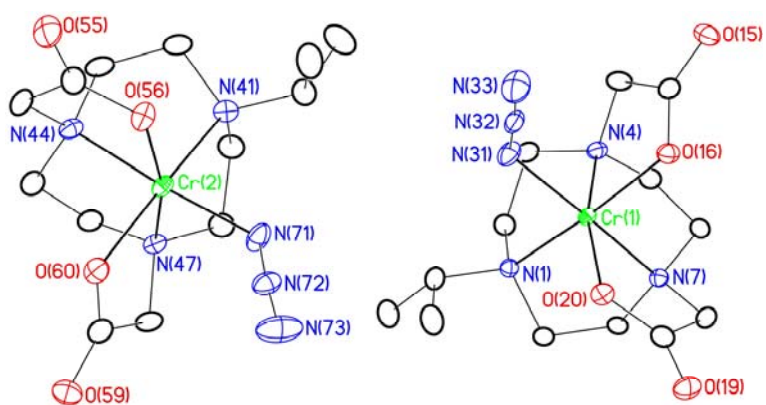
**Bond Distances are not Always What They Appear to be: Discovery and Un-Discovery of  
the Longest Cr(V)≡N Triple Bond**

*Yu-Fei Song,<sup>\*,†,‡</sup> John F. Berry,<sup>\*,||</sup> Thomas Weyhermüller,<sup>†</sup> and Eckhard Bill<sup>†</sup>*

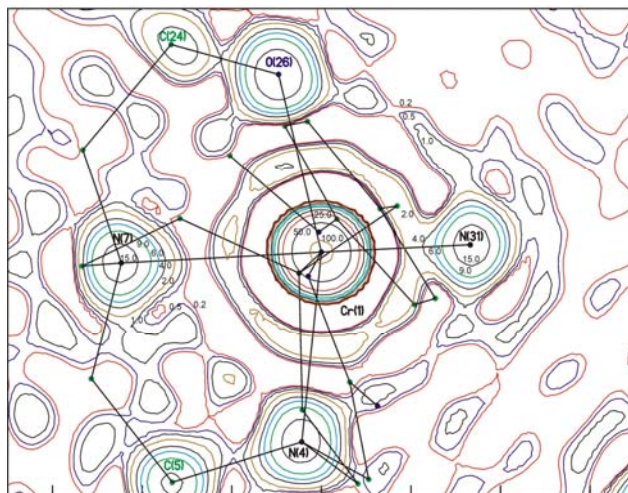
Max-Planck-Institut für Bioanorganische Chemie, Stiftstrasse 34-36, D-45470 Mülheim an der  
Ruhr, Germany, and the Department of Chemistry, University of Wisconsin – Madison, 1101  
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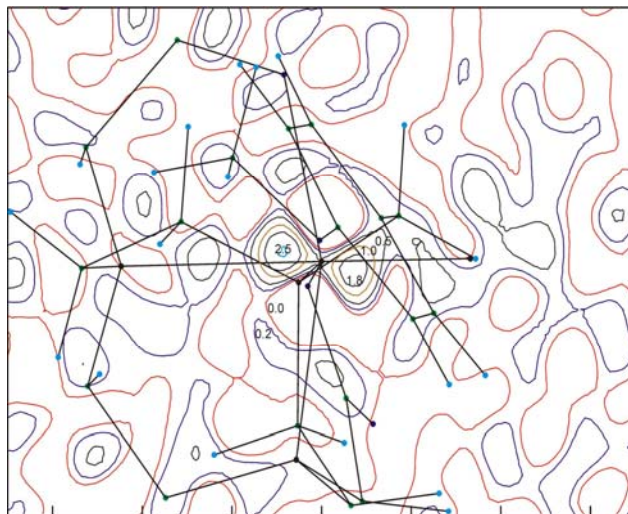
**Fig. S1.** Molecular structure of **4** with thermal ellipsoids drawn at the 30 % probability level and hydrogen atoms removed.



**Fig. S2.** Thermal ellipsoid plot of the asymmetric unit of **5** showing both crystallographically independent molecules. Displacement ellipsoids are drawn at the 30 % probability level and hydrogen atoms are removed for clarity.



**Fig. S3.** Electron density (calculated from  $F_o$ ) of **9** with the chromium atom refined with anisotropic displacement parameters.



**Fig. S4.** Difference map ( $F_o - F_c$ ) of **9** with central Cr atom refined isotropically. The lobes on either side of the Cr atom indicate the necessity for it to be re-refined being disordered over two positions.