

ADVANCED MATERIALS

Supporting Information

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Harnessing the Wisdom in Colloidal Chemistry to Make
Stable Single-Atom Catalysts

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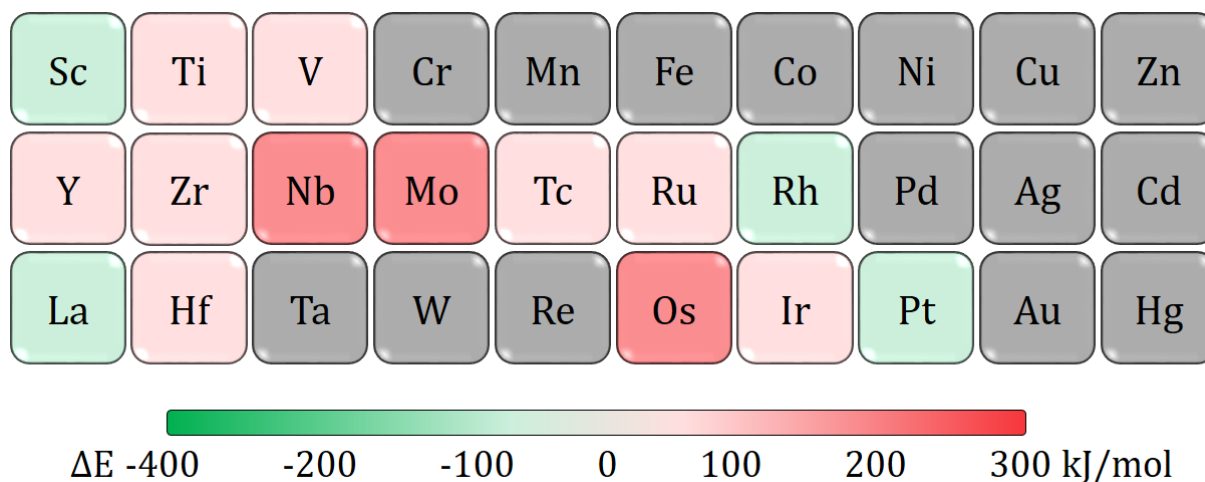


Figure S1. Difference (ΔE) between the cohesive energy between metal atoms in the bulk phase and the thermodynamic driving force to form metal-carbon bonds in kJ/mol. The lowest value indicates the highest stability of M–C bonds and thus the lowest tendency to form metal particles. For the elements in grey, no data is available.^[1]

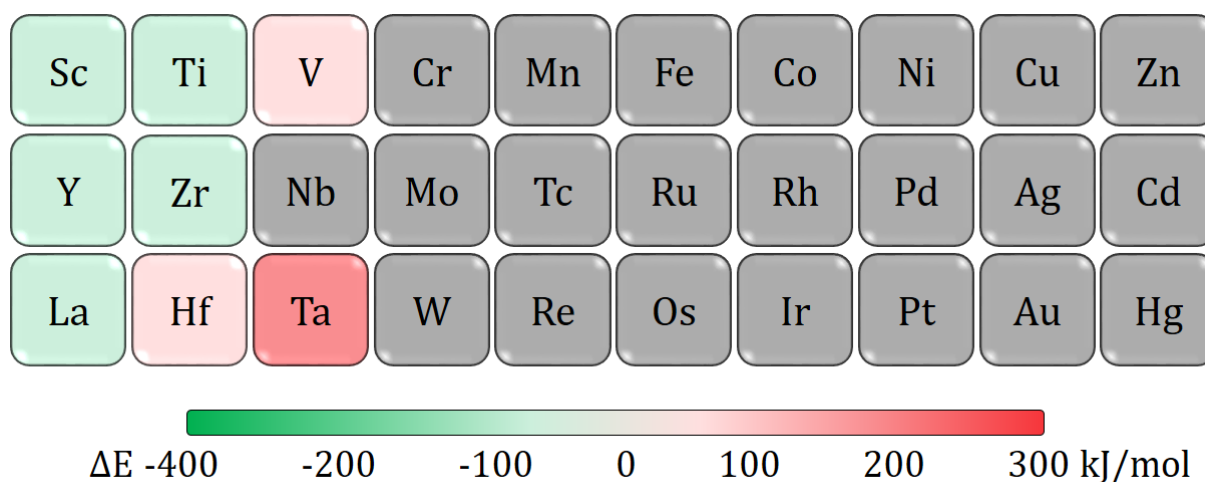


Figure S2. Difference (ΔE) between the cohesive energy between metal atoms in the bulk phase and the thermodynamic driving force to form metal-nitrogen bonds in kJ/mol. The lowest value indicates the highest stability of M–N bonds and thus the lowest tendency to form metal particles. For the elements in grey, no data is available.^[1]

[1] a) T. L. Cottrell, *The Strengths of Chemical Bonds*, 2nd edition ed., Butterworth, London, **1958**; b) S. W. Benson, *J. Chem. Educ.* **1965**, *42*, 502; c) J. A. Kerr, *Chem. Rev.* **1966**, *66*, 465-500; d) H. D. B. Jenkins, *CRC Handbook of Chemistry and Physics 1999-2000: A Ready-Reference Book of Chemical and Physical Data*, 79th edition ed., CRC Press, Boca Raton, Florida, USA, **1998**; e) J. A. Kerr, *CRC Handbook of Chemistry and Physics 1999-2000: A Ready-Reference Book of Chemical and Physical Data*, 81st edition ed., CRC Press, Boca Raton, Florida, USA, **2000**; f) J. R. Lombardi, B. Davis, *Chem. Rev.* **2002**, *102*, 2431-2460; g) A. M. Halpern, *J. Chem. Educ.* **2012**, *89*, 592-597; h) B. d. B. Darwent, *National Standard Reference Data Series* 31st edition ed., National Bureau of Standards, Washington, **1970**.