

[▶ My Profile](#) [▶ Log In](#)
[▶ My Profile](#) [▶ Log In](#)

▶ HOME
 ▶ ABOUT US
 ▶ CONTACT US
 ▶ HELP

[Home](#) / [Chemistry](#) / [Inorganic Chemistry](#)


European Journal of Inorganic Chemistry

 [What is RSS?](#)
Volume 2007, Issue 14, Pages 2083 - 2088

Published Online: 27 Mar 2007

Copyright © 2007 WILEY-VCH Verlag GmbH & Co. KGaA, Weinheim

 [Save Title to My Profile](#)
 [Set E-Mail Alert](#)


Go to the homepage for this journal to access trials, sample copies, editorial and author information, news, and more. ▶

 e-mail  print

Owned and Supported by


 EUChemSoc
[Go to Society Site](#)

 SEARCH All Content
 Publication Titles

[Advanced Search](#)
[CrossRef / Google Search](#)
[Acronym Finder](#)

SEARCH IN THIS TITLE

European Journal of Inorganic Chemistry

 Home / [Chemistry](#) / [Inorganic Chemistry](#)">

SEARCH BY CITATION

 Home / [Chemistry](#) / [Inorganic Chemistry](#)">


Vol: Issue: Page:

ONLINE SUBMISSION



... is attractive to both authors and referees: saves money and speeds publication.
[Submit now.](#)

NOW AVAILABLE

Supporting Information for selected articles is available free of charge from the "Additional Material" section of the relevant abstract and HTML full-text 

 [Save Article to My Profile](#)  [Download Citation](#) < [Previous Abstract](#) | [Next Abstract](#) >

[Abstract](#) | [References](#) | Full Text: [HTML](#), [PDF](#) (183k) | [Related Articles](#) | [Citation Tracking](#)

Full Paper

Synthesis, X-ray Structure, Thermal and Magnetic Behavior of [(bipy)₂Ni₂(μ-Cl)₂Cl₂(H₂O)₂]: The First Neutral Ferromagnetically Coupled Six-Coordinate Dichlorido-Bridged Nickel(II) Dimer

 Oluwatayo F. Ikotun¹, Wayne Ouellette¹, Francesc Lloret², Miguel Julve^{2*}, Robert P. Doyle^{1*}
¹Department of Chemistry, Syracuse University, Syracuse, NY 13244-4100, USA

²Department of Química Inorgànica/Instituto de Ciencia Molecular, Universitat de València, Polígono La Coma s/n, 46980 Paterna (València), Spain

 email: Miguel Julve (miguel.julve@uv.es) Robert P. Doyle (rpdoyle@syr.edu)

* Correspondence to Miguel Julve, ²Department of Química Inorgànica/Instituto de Ciencia Molecular, Universitat de València, Polígono La Coma s/n, 46980 Paterna (València), Spain

* Correspondence to Robert P. Doyle, ¹Department of Chemistry, Syracuse University, Syracuse, NY 13244-4100, USA

Funded by:

- Promega Corporation (Madison, WI, USA)
- iLEARN Program, Syracuse University
- MinisterioEspañol de Ciencia y Tecnología; Grant Number: BQU2004-03633

KEYWORDS

Crvstal structures • Nickel complexes • Ferromagnetic coupling • Thermal analysis

ABSTRACT

NiCl₂·6H₂O and 2,2'-bipyridine (bipy) (1:1) were allowed to react under ambient conditions in dimethyl sulfoxide in the presence of acetylacetonate (Hacac). The resulting green solution was concentrated in vacuo, and a green solid was isolated by precipitation with cold acetone. X-ray quality crystals of [(bipy)₂Ni₂(μ-Cl)₂(Cl)₂(H₂O)₂] (**1**) were grown by subsequent vapor/liquid diffusion of acetonitrile into a methanolic solution for one week. The structure of **1** consists of a dimeric nickel system with each metal atom in an octahedral geometry. Both equatorial bridging and axial chlorine atoms are present in this neutral species. The nickel-nickel distance (3.441 Å) is the shortest reported to date for this class of complexes and the bridging chlorido angles at 91.5° are the most acute. Variable-temperature magnetic susceptibility measurements reveal the complex to have the strongest ferromagnetic interaction reported to date ($J = +16.8 \text{ cm}^{-1}$, the Hamiltonian being defined as $H = -JS_A \cdot S_B$) for this family of complexes. (© Wiley-VCH Verlag GmbH & Co. KGaA, 69451 Weinheim, Germany, 2007)

Received: 6 February 2007

DIGITAL OBJECT IDENTIFIER (DOI)

10.1002/ejic.200700179 [About DOI](#)

ADDITIONAL MATERIAL

Supporting information for this article is available on the WWW under http://www.wiley-vch.de/contents/jc_2005/2007/i200700179_s.pdf or from the author.

Related Articles

- Find other [articles](#) like this in Wiley InterScience
- Find articles in Wiley InterScience written by any of the [authors](#)

Wiley InterScience is a member of CrossRef.



pages.

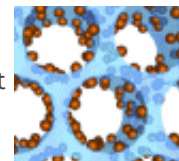
[See an example.](#)

NOW AVAILABLE

Keep up with the latest research with our RSS feeds, which provide the titles, authors, and the DOIs of Early View articles, including links to the full texts. RSS is an XML-based format for sharing and distributing web content. To receive the RSS feed, just click on the orange feed icon near the cover picture, and visit interscience.wiley.com/rss for more information.

HOT TOPICS

If you can't read everything, but need to keep up with the latest



developments in a hot topic, here is a selection of articles from *Angewandte Chemie* and its sister journals on...

- [Organocatalysis](#)
- [Mesoporous Materials](#)
- [RNA](#)
- [Gold](#)

Now also available as RSS feeds!

RELATED WILEY PRODUCTS

[Angewandte Chemie](#)

[Chemistry A European Journal](#)

[Chemistry An Asian Journal](#)



[Chem-Phys-Chem](#)

[Chem-Bio-Chem](#)

[Chem-Med-Chem](#)



[European Journal of Organic Chemistry](#) [European Journal of Inorganic Chemistry](#) [Advanced Synthesis & Catalysis](#)

Click on the covers to find out more about our must-have chemistry journals.

More info for [USA/CDN](#); [D/A/CH](#); [Other](#)

REPRINT INQUIRIES



Need a reprint?

Paper or electronic reprints are available for all content published on Wiley InterScience. Inquiries can be submitted online.

[Find out more about reprints](#)

INTRODUCING



Now available online...
Encyclopedia of Inorganic Chemistry, 2e

Editor-in-Chief R. Bruce King
The ultimate resource on inorganic chemistry – new and completely revised

[Find out more](#)

NOW AVAILABLE

**Chemistry Societies:
Annalen, Angewandte,
Berichte and more Backfile
Collection
(1832-1997)**



Fully searchable and live-linked with current web content, this backfile collections brings the complete contents of four leading journals— 873,000 pages — dating back to Volume 1, Issue 1 to your desktop. A one-time fee delivers ongoing access with no strings attached.

[Find out more](#)

[Request a Quote](#)

[About Wiley InterScience](#) | [About Wiley](#) | [Privacy](#) | [Terms & Conditions](#)
[Copyright](#) © 1999-2007 [John Wiley & Sons, Inc.](#) All Rights Reserved.