

## *N,N'*-ethylenediaminobis(benzylphosphonic acids) as a potent class of chelators for metal ions.

### Autorzy

Joanna Gałęzowska

Paweł Kafarski

Henryk Kozłowski

Piotr Młynarz

Valeria Marina Nurchi

T. Pivetta

### Rok wydania

2009

### Czasopismo

Inorganica Chimica Acta

### Numer woluminu

362

### Strony

707-713

### DOI

10.1016/j.ica.2008.04.035

### Kolekcja

Naukowa

### Język

Angielski

### Typ publikacji

Artykuł

### Streszczenie

Aminophosphonates were found to be effective metal ion chelators. Ethylenediamine (EN) itself binds strongly to a series of metal ions forming efficient five-membered chelate ring using two nitrogen donors. Combination of EN with phosphonate function results in the family of low molecular chelating agents. Introduction of a pyridine moiety into EN–phosphonate structure results in the very effective ligands involving a four-nitrogen donor set to coordinate the metal ion. In this work, the potentiometric and spectroscopic data for two analogues 2,2'-(ethylenedi-imino)bis(3-pyridylphosphonic-acid) –  $L^2$  and 2,2'-(ethylenedi-imino)bis(2-pyridyl-phosphonic-acid) –  $L^3$ , comprising EN, two phosphonates and two pyridines with Cu(II), Ni(II) and Zn(II) ions are presented showing very high efficacy of one of the ligands studied.

### Słowa kluczowe

Aminophosphonates, Cu(II), Ni(II), Zn(II) complexes, Potentiometry, UV–Vis, EPR and NMR spectroscopy

### Adres publiczny

<https://doi.org/10.1016/j.ica.2008.04.035>

### Strona internetowa wydawcy

<http://www.elsevier.com>