

Contents

Number 5, October 2009

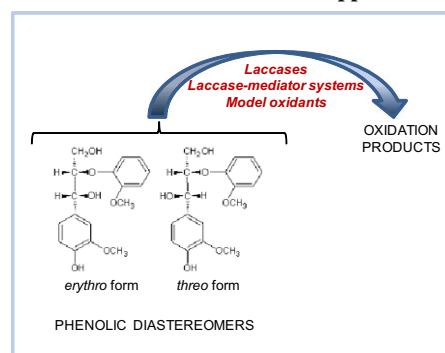
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Oxidation of the *erythro* and *threo* forms of the phenolic lignin model compound 1-(4-hydroxy-3-methoxyphenyl)-2-(2-methoxyphenoxy)-1,3-propanediol by laccases and model oxidants

pp 143–148

Christina Bohlin, Knut Lundquist and Leif J. Jönsson *

Diastereomers of a phenolic lignin model were used to investigate the stereo-preference of enzymic and non-enzymic oxidants. With phenolic substrates rather than non-phenolic, direct oxidation by laccases can be studied.

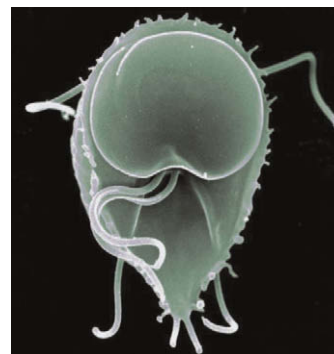


Mechanisms of catalysis and inhibition operative in the arginine deiminase from the human pathogen *Giardia lamblia*

pp 149–161

Zhimin Li, Liudmila Kulakova, Ling Li, Andrey Galkin, Zhiming Zhao, Theodore E. Nash, Patrick S. Mariano, Osnat Herzberg and Debra Dunaway-Mariano *

As part of an ongoing program to identify *G. lamblia* enzymes for the development of therapeutic agents, we selected GIADI for target validation, structure determination, kinetic characterization and inhibitor testing.

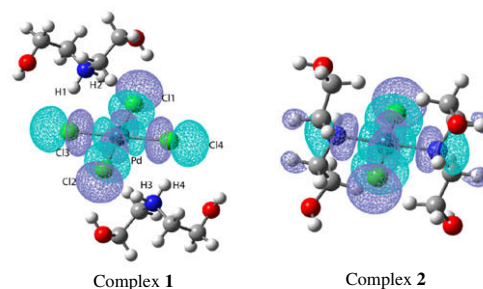


Diethanolamine Pd(II) complexes in bioorganic modeling as model systems of metalloproteinases and soybean lipoxygenase inhibitors

pp 162–166

Zorica D. Petrović, * Dimitra Hadjipavlou-Litina, * Eleni Pontiki, Dušica Simijonović and Vladimir P. Petrović

Complexes **1** and **2** were tested for their *in vitro* soybean lipoxygenase inhibitory and free radical scavenging activity. The hydrolytic reaction of the complex **1** with AcHis-Gly was investigated.

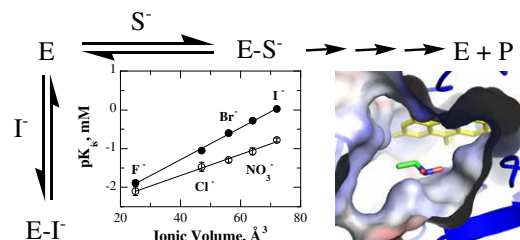


Kinetic evidence for an anion binding pocket in the active site of nitronate monooxygenase

pp 167–172

Kevin Francis and Giovanni Gadda *

An investigation of the competitive inhibition of nitronate monooxygenase by inorganic, monovalent anions reveals an anion binding pocket in the active site of the enzyme.

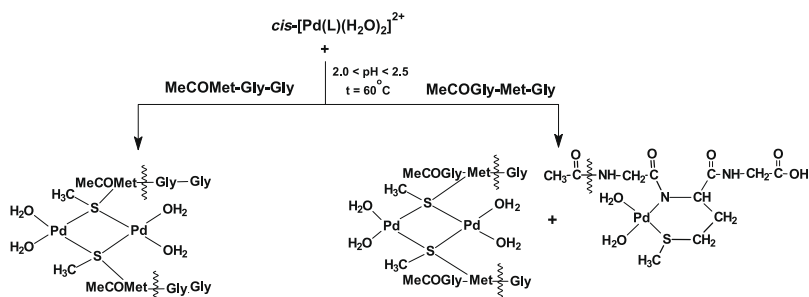


Hydrolysis of the amide bond in methionine-containing peptides catalyzed by various palladium(II) complexes: Dependence of the hydrolysis rate on the steric bulk of the catalyst

pp 173–179

Snežana Rajković, Biljana Đ. Glišić, Marija D. Živković and Miloš I. Djuran *

Hydrolysis of the amide bond in methionine-containing peptides catalyzed by various $cis-[Pd(L)(H_2O)_2]^{2+}$ -type complexes were studied by 1H NMR spectroscopy and UV-Vis spectrophotometry.



Synthesis and NMR properties of derivatives of 5,6-dihydroborauracil and 5,6-dihydroborathymine

pp 180–184

Tomasz Ruman, * Karolina Długopolska, Anna Kuśnierz and Wojciech Rode

Novel boron compounds, a series of 4-hydroxy-5,6-dihydroborauracil and 4-hydroxy-5,6-dihydroborathymine derivatives containing various substituents at 3-, 5- and 6-positions, is presented. The spectroscopic properties, along with analyses of NMR-controlled boron compound–alcohol and boron compound–amine interactions, proves the existence of sp^3 -hybridized, stable B,B-bis-methoxy-5,6-dihydroborauracils and pyridine-/n-butylamine-5,6-dihydroborauracils ate-complexes in solution.

