

Dr Biljana V. Petrović, full professor
Curriculum Vitae

<i>Last name:</i>	Petrovic
<i>First name:</i>	Biljana
<i>Father's name:</i>	Vitomir
<i>Birth:</i>	04.10.1970.
<i>Place of birth:</i>	Zajecar, Serbia
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EDUCATION

<i>Primary shool:</i>	Zajecar, Serbia, 1977 – 1985.
<i>Secondary shool:</i>	Zajecar, Serbia, 1985 – 1989.
<i>Faculty:</i>	Faculty of Science, Department of Chemistry University of Kragujevac Kragujevac, 1989 – 1994.
<i>Postgraduate studies:</i>	Faculty of Science University of Kragujevac Kragujevac, 1994 -1999.
<i>PhD studies:</i>	Faculty of Science University of Kragujevac, Kragujevac, 1999 – 2005.
<i>Other languages:</i>	English

PROFESIONAL CAREER

<i>Assistant professor:</i>	Department of Chemistry Faculty od Science University of Kragujevac Kragujevac, 2007 -2013
<i>Associate professor:</i>	Department of Chemistry Faculty od Science University of Kragujevac Kragujevac, 2013 -2020
<i>Full professor:</i>	Department of Chemistry Faculty of Science University of Kragujevac Kragujevac, 2020 -
<i>Abroad specialization:</i>	University of Erlangen-Nurnberg, Germany – 2006, 2007,

	University of Ghent, Belgium, 2009
<i>Teaching courses:</i>	Advanced inorganic chemistry (BSc), Mechanisms of the inorganic reactions (BSc), Chemistry of the atmosphere (BSc), Inorganic synthesis and methods of characterization (Master), Chemistry of the aqueous solutions (Doctoral)
<i>Scientific field of research:</i>	Inorganic chemistry, Bioinorganic chemistry

PARTICIPATION ON PROJECTS

Domestic:	Number of project	Name of project
	1254 (2002-2005)	Synthesis and reactivity of new organic compounds and metal complexes as potential therapeutic and biologically active agents
	142008 (2005-2010)	Structure of the new complexes of transition metal ions and mechanism of their reactions with biologically important ligands
	172011 (2011-2020)	Study of the mechanism of the reactions of transition metal ion complexes with biologically important molecules
International:	Number of project	Name of project
	1. 2. 3. 4.	COST action: D39 "Metallo-drug design and action", 2006-2011. The bilateral project between Republic of Serbia and Federal Republic of Germany for the project period 2009 – 2010: "Investigation of the mechanism of interactions of Pd(II) and Pt(II) complexes with biological relevant molecules" The bilateral project between Republic of Serbia and Federal Republic of Germany for the project period 2011 – 2012: "Kinetics and mechanism of the reactions of Au(III), Pt(IV) and Ru(II/III) complexes and some biomolecules" The bilateral project between Republic of Serbia and Croatia for the period 2010 – 2011: "Study of the interactions of transition metal ion complexes with some important biological ligands"

MEMBERSHIP IN DOMESTIC AND FOREIGN SCIENTIFIC ORGANIZATIONS

Member of the Serbian Chemistry Society

SUPERVISOR:

<i>PhD students:</i>	2 defended, 2 in progress
<i>Master degree's:</i>	15
<i>Diploma:</i>	19

List of publications of Dr Biljane Petrovic (Djordjević)

Papers in International Journals

- A. Rilak Simović, J. Bogojeski, **B. Petrović**, S. Jovanović-Stević
Bis-pyrazolylpyridine complexes of some transition metal ions: Structure-Activity Relationships and Biological Activity
Macroheterocycles, 2020, 13, 201-209.
ISSN: 1998-9539
DOI:10.6060/mhc200499s
- D. Čočić, S. Jovanović-Stević, R. Jelić, S. Matić, S. Popović, P. Djurdjević, D. Baskić, **B. Petrović**
Homo- and hetero-dinuclear Pt(II)/Pd(II) complexes: studies of hydrolysis, nucleophilic substitution reactions, DNA/BSA interactions, DFT calculations, molecular docking and cytotoxic activity
Dalton Transactions, 2020, 49, 14411-14431.
ISSN: 1477-9226
DOI:10.1039/d0dt02906h
- S. Radisavljevic, A. Djekovic-Kesic, D. Cacic, R. Puchta, L. Senft, M. Milutinovic, N. Milivojevic, **B. Petrović**
Studies of the stability, nucleophilic substitution reactions, DNA/BSA interactions, cytotoxic activity, DFT and molecular docking of some tetra- and penta-coordinated gold(III) complexes
New Journal of Chemistry, 2020, 4, 11172-11187.
ISSN: 1144-0546
DOI: <https://doi.org/10.1039/D0NJ02037K>
- S. Radisavljevic, **B. Petrović**
Gold(III) complexes: An overview on their kinetics, interactions with DNA/BSA, Cytotoxic activity, and computational calculations
Frontiers in chemistry, 2020, 8, 379.
ISSN: 2296-02646
DOI: <https://doi.org/10.3389/fchem.2020.00379>
- M. Medjedovic, A. Rilak Simovic, D. Cacic, M. Milutinovic, L. Senft, S. Blagojevic, N. Milivojevic, **B. Petrović**
Dinuclear ruthenium(II) polypyridyl complexes: Mechanistic study with biomolecules, DNA/BSA interactions and cytotoxic activity
Polyhedron, 2020, 178, 114334.
ISSN: 0277-5387
DOI: <https://doi.org/10.1016/j.poly.2019.114334>
- S. Radisavljević, D. Čočić, S. Jovanović, B. Šmit, M. Petković, N. Milivojević, N. Planojević, S. Marković and **B. Petrović**
Synthesis, characterization, DFT study, DNA/BSA-binding affinity, and cytotoxicity of some dinuclear and trinuclear gold(III) complexes
Journal of Biological Inorganic Chemistry, 2019, 24 (7), 1057-1076.
ISSN: 0949-8257
DOI: <http://doi.org/10.1007/s00775-019-01716-8>
- A. Franich, M. D. Živković, D. Čočić, **B. Petrović**, M. Milovanović, A. Arsenijević, J. Milovanović, D. Arsenijević, B. Stojanović, M. I. Đuran and S. Rajković
New dinuclear palladium(II) complexes with benzodiazines as bridging ligands: interactions with CT-DNA and BSA, and cytotoxic activity
Journal of Biological Inorganic Chemistry, 2019, 24 (7), 1009-1022.
ISSN: 0949-8257
DOI: <http://doi.org/10.1007/s00775-019-01695-w>

- S. Mangelinckx, M. Kostić, S. Backx, **B. Petrović** and N. De Kimpe
Synthesis of racemic 2-(Aminomethyl)cyclopropane-1,1-dicarboxylic Acid as a New Constrained γ-Amino Dicarboxylic Acid Bypassing Alkyl 3-Aza-2-oxobicyclo[3.1.0]hexane-1-carboxylates
European Journal of Organic Chemistry, 2019, 2019 (31-32), 5187-5189.
ISSN: 1434-193X
DOI: <http://doi.org/10.1002/ejoc.201900542>
- **B. Petrović**, S. Jovanović, R. Puchta and R. van Eldik
Mechanistic insight on the chemistry of potential Pt antitumor agents as revealed by collaborative research performed in Kragujevac and Erlangen
Inorganica Chimica Acta, 2019, 495, 118953.
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DOI: <http://doi.org/10.1016/j.ica.2019.06.004>
- S. Jovanović, J. Bogojeski, M. V. Nikolić, M. Ž. Mijajlović, D. Lj. Tomović, A. M. Bukonjić, S.M. Knežević Rangelov, N. R. Mijailović, Z. Ratković, V. V. Jevtić, **B. Petrović**, S. R. Trifunović, S. Novaković, G. Bogdanović and G. P. Radić
Interactions of binuclear copper(II) complexes with S-substituted thiosalicylate derivatives with some relevant biomolecules
Journal of Coordination Chemistry, 2019, 72 (10), 1603-1620.
ISSN: 0095-8972
DOI: <http://doi.org/10.1080/00958972.2019.1610561>
- Popović, M. Nikolić, M. Mijajlović, Z. Ratković, V. Jevtić, S. R. Trifunović, G. Radić, M. Zarić, P. Čanović, M. Milovanović, S. Radisavljević, M. Mešedović, **B. Petrović** and I. Jovanović
DNA binding and atitumor activities of zinc(II) complexes with some S-alkenyl derivatives of thiosalicylic acid
Transition Metal Chemistry, 2019, 44 (3), 219-228.
ISSN: 0340-4285
DOI: <http://doi.org/10.1070/s11243-018-0285-6>
- D. Ćočić, S. Jovanović, S. Radisavljević, J. Korzekwa, A. Scheurer, R. Puchta, D. Baskić, D. Todorović, S. Popović, S. Matić and **B. Petrović**
New monofunctional platinum(II) and palladium(II) complexes: Studies of the nucleophilic substitution reactions, DNA/BSA interactions, and cytotoxic activity
Journal of Inorganic Biochemistry, 2018, 189, 91-102.
ISSN: 0162-0134
DOI: <http://dx.doi.org/10.1016/j.jinorgbio.2018.09.005>
- D. Ćočić, S. Jovanović, S. Rajković and **B. Petrović**
Kinetics and mechanism of the substitution reactions of dinuclear platinum(II) complexes with important bio-molecules
Inorganica Chimica Acta, 2018, 482, 635-642.
ISSN: 0020-1693
DOI: <http://doi.org/10.1016/j.ica.2018.07.004>
- Z. Besser Silconi, S. Benazić, J. Milovanović, M. Jurišević, D. Đorđević, M. Nikolić, M. Mijajlović, Z. Ratković, G. Radić, S. Radisavljević, **B. Petrović**, G. Radosavljević, M. Milovanović and N. Arsenijević
DNA binding and atitumor activities of platinum (IV) and zinc(II) complexes with some S-alkyl derivatives of thiosalicylic acid
Transition Metal Chemistry, 2018, 43 (8), 719-729.
ISSN: 0340-4285
DOI: <http://doi.org/10.1070/s11243-018-0260-2>
- S. Radisavljević, A. Đeković-Kesić, S. Jovanović and **B. Petrović**
Kinetics and mechanism of interactions of some monofunctional Au(III) complexes with sulphur nucleophiles
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- D. Čočić, S. Jovanović, M. Nišavić, D. Baskić, D. Todorović, S. Popović, Ž. Bugarčić and **B. Petrović**
New dinuclear palladium(II) complexes: Studies of the nucleophilic substitution reactions, DNA/BSA interactions and cytotoxic activity
Journal of Inorganic Biochemistry, 2017, 175, 67-79.
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- S. Jovanovic, K. Obrenčević, Ž. D. Bugarčić, I. Popović, J. Žakula, **B. Petrović**
New bimetallic palladium(II) and platinum(II) complexes: studies of the nucleophilic substitution reactions, interactions with CT-DNA, bovine serum albumin and cytotoxic activity
Dalton Transactions, 2016, 45, 12444 – 12457.
ISSN: 1477-9226
DOI: 10.1039/C6DT02226J
- M. Kosović, S. Jovanović, G. Bogdanović, G. Giester, Ž. Jaćimović, Ž. D. Bugarčić and **B. Petrović**
Kinetics and mechanism of the substitution reactions of some monofunctional Pt(II) complexes with heterocyclic nitrogen donor molecules. Crystal structure of $[Pt(bpma)(pzBr)]Cl_2 \cdot 2H_2O$
Journal of Coordination Chemistry, 2016, 69(19), 2819-2831.
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DOI: <http://dx.doi.org/10.1080/00958972.2016.1224336>
- M. Kosović, Ž. Jaćimović, Ž. D. Bugarčić and **B. Petrović**
Kinetics and mechanism of the substitution reactions of some bifunctional palladium(II) complexes with different nitrogen- donor heterocycles
Transition Metal Chemistry, 2016, 41 (2), 161-168.
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- M. Kosović, Ž. Jaćimović, Ž. D. Bugarčić and **B. Petrović**
Kinetics and mechanism of the substitution reactions of some monofunctional Pd(II) complexes with different nitrogen-donor heterocycles
Journal of Coordination Chemistry, 2015, 68 (17-18), 3003-3012.
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- S. Jovanović, **B. Petrović**, M. Petković and Ž. D. Bugarčić
Kinetics and mechanism of substitution reactions of the new bimetallic $[\{PdCl(bipy)\}\{\mu-(NH_2(CH_2)_6NH_2)\}\{PtCl(bipy)\}]Cl(ClO_4)$ complex with important bio-molecules
Polyhedron, 2015, 101, 206-214.
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DOI: <https://doi.org/10.1016/j.poly.2015.09.021>
- S. Marković, R. Karkalić and **B. Petrović**
Disproportionation reaction of iodous acid, HOIO. Determination of the concentrations of the relevant ionic species H^+ , H_2OI^+ , and IO_3^-
Research on Chemical Intermediates, 2015, 41, 1293-1300.
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DOI: <https://doi.org/10.1007/s11164-013-1273-2>
- R. M. Karkalić, D. B. Jovanović, S. S. Radaković, D. S. Rajić, **B. V. Petrović**, N. D. Ivanković and Ž. B. Senić
The influence of the passive evaporative cooling vest on a chemical industry workers and physiological strain level in hot conditions
Hemiska industrija, 2015, 69 (6), 587-594.
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- S. Jovanović, **B. Petrović**, Ž. D. Bugarčić and R. Van Eldik
Reduction of some Pt(IV) complexes with biologically important sulfur-donor ligands
Dalton Transaction, 2013, 42 (24), 8890 – 8896.
ISSN: 1477-9226
DOI: 10.1039/C3DT50751C
- A. Mijatović, R. M. Jelić, J. Bogojeski, Ž.D. Bugarčić and **B. V. Petrović**
Kinetics, mechanism, and equilibrium studies of the reactions between ruthenium(II) complex and some nitrogen- and sulfur-donor nucleophiles
Monatshefte fur Chemie, 2013, 144, 1489-1498.
ISSN: 0026-9247
DOI: <https://doi.org/10.1007/s00706-013-1044-1>
- E. Selimović, **B. Petrović**, D. Čanović, Ž. D. Bugarčić and J. Bogojeski
Kinetic studies on the reactions of $[(\text{TLtBu})\text{PtCl}]^+$ and $[\text{Pt}(\text{tpdm})\text{Cl}]^+$ complexes with some thiols and thioethers
Australian Journal of Chemistry, 2013, 66, 534-538.
ISSN: 0004-9425
DOI: <https://doi.org/10.1071/CH12218>
- A. Mijatović, B. Šmit, A. Rilak, **B. Petrović**, D. Čanović, Ž. D. Bugarčić
NMR kinetic studies of the interactions between $[\text{Ru}(\text{terpy})(\text{bipy})(\text{H}_2\text{O})]^{2+}$ and some sulfur-donor ligands
Inorganica Chimica Acta, 2013, 394, 552-557.
ISSN: 0020-1693
DOI: <https://doi.org/10.1016/j.ica.2012.09.016>
- E. Selimović, T. Vulović, **B. Petrović**, Ž. Bugarčić and J. Bogojeski
Complex formation reactions of two sterically hindered platinum(II) complexes with some N-bonding ligands
Transition Metal Chemistry, 2013, 38, 635-640.
ISSN: 0340-4285
DOI: <https://doi.org/10.1007/s11243-013-9731-7>
- **B. Petrović**, Ž. D. Bugarčić, A. Dees, I. Ivanović-Burmazović, F. W. Heinemann, R. Puchta, S. N. Steinmann, C. Corminboeuf and R. van Eldik
Role of π -Acceptor Effects in Controlling the Lability of Novel Monofunctional Pt(II) and Pd(II) Complexes: Crystal Structure of $[\text{Pt}(\text{tripyridinedimethane})\text{Cl}] \text{Cl}$
Inorganic Chemistry, 2012, 51, 1516-1529.
ISSN: 0020-1669
DOI: 10.1021/ic201807a
- Ž. D. Bugarčić, J. Bogojeski, **B. Petrović**, S. Hochreuther and R. van Eldik
Mechanistic studies on the reactions of platinum(II) complexes with nitrogen and sulfur-donor biomolecules
Dalton Transactions, 2012, 41, 12329-12345.
ISSN: 1477-9226
DOI: 10.1039/C2DT31045G
- A. Djeković, **B. Petrović**, Ž. D. Bugarčić, R. Puchta and R. van Eldik
Kinetics and mechanism of the reactions of Au(III) complexes with some biologically relevant molecules
Dalton Transactions, 2012, 41, 3633-3641.
ISSN: 1477-9226
DOI: 10.1039/C2DT11843B
- M. Djurović, J. Bogojeski, **B. Petrović**, D. Petrović, F.W. Heinemann and Ž. D. Bugarčić
Ligand substitution reactions of some sterically hindered Pt(II) complexes. The crystal structure of $[\text{TL}^{\text{tBu}}\text{H}_2](\text{ClO}_4)_2 \cdot 0.5\text{H}_2\text{O}$
Polyhedron, 2012, 41, 70-76.
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- A. Mijatović, J. Bogojeski, **B. Petrović** and Ž. D. Bugarčić
Substitution reactions of some novel sterically hindered monofunctional Pd(II) complexes
Inorganica Chimica Acta, 2012, 383, 300-304.
ISSN: 0020-1693
DOI: <https://doi.org/10.1016/j.ica.2011.11.031>
- R. Jelić, S. Marković and **B. Petrović**
Equilibrium studies on complex formation reactions of dichlorido[(R,R)-trans-1,2-diaminocyclohexane] platinum(II) complex with ligands of biological significance
Monatshefte fur Chemie, 2011, 142, 985-992.
ISSN: 0026-9247 DOI: <https://doi.org/10.1007/s00706-011-0553-z>
- A. Rilak, **B. Petrović**, S. Grgurić-Šipka, Ž. Tešić and Ž. D. Bugarčić
Kinetics and mechanism of the reactions of Ru(II)-arene complex with some biologically relevant ligands
Polyhedron, 2011, 30, 2339-2344.
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- B. Damnjanović, B. Petrović, **B. Petrović**, J. Dimitrić-Marković and M. Petković
Comparison of MALDI-TOF mass spectra of [PdCl(dien)]Cl and [Ru(en)₂Cl₂]Cl acquired with different matrices
Journal of the Serbian Chemical Society, 2011, 76, 1687-1701.
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DOI: 10.2298/JSC110201145D
- B. Damnjanović, T.Kamčeva, **B.Petrović**, Ž. D. Bugarčić and M. Petrović
Laser desorption and ionization time-of-flight versus matrix-assisted laser desorption and ionization time of-flight mass spectroscopy of Pt(II) and Ru(III) metal complexes
Analytical Methods, 2011, 3, 400-407.
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- S. Jovanović, **B. Petrović**, P. Čanović and Ž. D. Bugarčić
Kinetics of the substitution reactions of some Pt(II) complexes with 5-GMP and L-histidine
International Journal of Chemical Kinetics, 2011, 43, 99-106.
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DOI: 10.1002/kin.20537
- M. Milovanović, A. Djeković, V. Volarević, **B. Petrović**, N. Arsenijević and Ž. D. Bugarčić
Ligand substitution reactions and cytotoxic properties of [Au(L)Cl₂]⁺ and [AuCl₂(DMSO)₂]⁺ complexes (L = ethylenediamine and S-methyl-cysteine)
Journal of Inorganic Biochemistry, 2010, 104(9), 944-949.
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- S. Jovanović, **B. Petrović** and Ž. Bugarčić
UV-Vis, HPLC, and 1H-NMR studies of the substitution reactions of some Pt(IV) complexes with 5'-GMP and L-histidine
Journal of Coordination Chemistry, 2010, 63(14-16), 2419-2430.
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- M. Petković, **B. Petrović**, Ž. D. Bugarčić, J. Dimitrić-Marković, T. Momić and V. Vasić
Flavonoids as matrices for MALDI-TOF mass spectroscopy analysis of transition metal complexes
International Journal of Mass Spectrometry, 2010, 290, 39-46.
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- V. Volarević, M. Milovanović, A. Djeković, **B. Petrović**, N. Arsenijević and Ž. D. Bugarčić
The cytotoxic effects of some selected gold(III) complexes on 4T1 cells and their role in the prevention of breast tumor growth in BALB/c mice
Journal of the Balcan Oncology, 2010, 15, 768-773.
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- S. Marković and **B. Petrović**
Kinetics of the disproportionation reactions of HIO_2 in acidic aqueous solutions
International Journal of Chemical Kinetics, 2010, 42(11), 687-691.
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- **B. Petrović**, Ž. D. Bugarcic and R. van Eldik
Kinetic studies on the reactions of $[\text{Pd}(\text{dach})(\text{X-Y})]$ complexes with some DNA constituents
Dalton Transactions, 2008, 807-813.
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- Ž. D. Bugarčić, **B. Petrović**, Z. M. Bugarčić, S. M. Janković, S. V. Janković, G. Lukić, M- Novaković, V. Kostović, S. Popović, P. Djurdjević, D. Baskić and N. Arsenijević
Effects of cisplatin and other Pt(II) complexes on spontaneous motility of isolated human oviduct
Toxicology in Vitro, 2008, 22, 1878-1882.
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- B. Šmit, **B. Petrović**, S. Sovilj, D. Čanović and Ž. D. Bugarčić
Study of the reactions of cisplatin with ranitidine and nizatidine by means of ^1H NMR spectroscopy in D_2O
Monatshefte fur Chemie, 2008, 139, 1197-1202.
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Kinetics and mechanism of the pyridine-catalyzed reaction of phenylselenenyl halides and some unsaturated alcohols
Journal of Molecular Catalysis. A: Chemical, 2008, 287(1-2), 171-175.
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Kinetics and mechanism of the substitution reactions of $[\text{PtCl}(\text{bpma})^+]$, $[\text{PtCl}(\text{gly-met-S,N,N})]$ and their aqua analogues with L-methionine, glutathione and 5'-GMP
Journal of Biological Inorganic Chemistry, 2007, 12, 1141-1150.
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- D. Petrović, B. Stojimirović, B. Petrović, Z. M. Bugarčić and Ž. D. Bugarčić
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Bioorganic and Medicinal Chemistry, 2007, 4203-4211.
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- J. Rosić, **B. Petrović**, M. I. Djuran and Ž. D. Bugarčić
Thermodynamic and kinetic studies on reactions of Pt(II) complexes with pyrazole, pyridazine and 1,2,4-triazole
Monatshefte fur Chemie, 2007, 138, 1-11.
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Kinetic and mechanistic study on the reactions of $[Pt(bpma)(H_2O)]^{2+}$ and $[Pd(bpma)(H_2O)]^{2+}$ with some nucleophiles. Crystal structure of $[Pd(bpma)(py)][ClO_4]_2$
Dalton Transactions, 2006, 24, 2943-2949.
ISSN: 1477-9226
DOI: 10.1039/B602950G
- **B. Petrović** and Ž. D. Bugarčić
Kinetics and mechanistic study on the reactions of $[Pd(dien)H_2O]^{2+}$ and $[Pt(dien)H_2O]^{2+}$ with L-cysteine and S-methyl-L-cysteine
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- Ž. D. Bugarčić, **B. Petrović** and E. Zangrando
Kinetics and mechanism of the complex formation of $[Pd(NNN)Cl]^+$ with pyridines in methanol: synthesis and crystal structure of $[Pd(terpy)(py)][ClO_4]_2$
Inorganica Chimica Acta, 2004, 357, 9, 2650-2656.
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