

## GLIGOR JOVANOVSKI – Curriculum vitae

### Education (*degrees, dates, universities*)

- Ph.D. in Chemistry, 1981, Zagreb University, Faculty of Science, Department of Chemistry, Zagreb, Croatia
- M.Sc. in Chemistry, 1974, Zagreb University, Department of Chemistry, Faculty of Science, Zagreb, Croatia
- B.Sc. in Chemistry, 1969, “Sts Cyril & Methodius” University, Faculty of Science, Institute of Chemistry, Skopje, Macedonia

### Career/Employment (*employers, positions and dates*)

- 2010 - Retired
- 1993 - 2010 - Professor, “Sts Cyril & Methodius” University, Faculty of Science, Institute of Chemistry, Skopje, Republic of Macedonia
- 1988 - 1993 - Associate Professor, “Sts Cyril & Methodius” University, Faculty of Science, Institute of Chemistry, Skopje, Republic of Macedonia
- 1982 - 1988 - Reader, “Sts Cyril & Methodius” University, Faculty of Science, Institute of Chemistry, Skopje, Republic of Macedonia
- 1971 - 1982 - Assistant lecturer, “Sts Cyril & Methodius” University, Faculty of Science, Institute of Chemistry, Skopje, Republic of Macedonia

### Teaching

- Structure of Atoms and Chemical Bonding
- Structure of Molecules
- Crystal Chemistry
- Diffraction Methods in Crystal Structure Determination
- Methodology of Research

### Research

- **main field:** Crystal Structure Analysis by X-ray Diffraction
- **other fields:** Infrared and Raman Vibrational Spectroscopy of Solids
- **current research interest:** - Structural (X-ray) and Spectral (mainly IR and Raman) Study of Metal Saccharinates  
- Collection, Identification and Spectral (mainly IR and Raman) and Structural (X-ray) Characterization of Minerals from the Republic of Macedonia.

### Visits Abroad

- University of Zagreb, Faculty of Science, Zagreb, Croatia (1972-1974); (1979-1981)
- Uppsala University, Institute of Chemistry, Uppsala, Sweden (1984; 1985)
- Shorter visits of the University of Sofia, Bulgaria (1984); University of Siegen, Germany (2001).

### Professional Experience (Leading Positions)

- Head of the Postgraduate Studies at the Institute of Chemistry, Faculty of Science, Skopje (1983-1986)
- Head of the Institute of Chemistry, Faculty of Science, Skopje (1986-1988)
- Pro-Dean of the Faculty of Science, Skopje (1993-1995)
- Dean of the Faculty of Science, Skopje (1995-1997)
- Editor-in-chief of the *Bulletin of the Chemists and Technologists of Macedonia* (1993-1997)
- Member of the Advisory Board of the *Bulletin of the Chemists and Technologists of Macedonia* (1998- )
- Editor of the *Chemical Sciences Journal* (2010- )
- Editor of the *ISRN Spectroscopy* (2012- )
- Head of the Department for Natural, Mathematical and Biotechnical Sciences – Macedonian Academy of Sciences and Arts (2012 - )

### **Honours, Awards, Fellowships, Membership of Professional Societies**

- Order of Merit with Silver Star
- First Prize of the Association of the publishers and booksellers of the Republic of Macedonia for the best original edition in the field of literature, science, culture and art between the two Book Fairs (2012 – 2013) for the monograph *Minerals from the Republic of Macedonia with an Introduction to Mineralogy* by authors Gligor Jovanovski, Blažo Boev, Petre Makreski; Publisher MANU, Skopje.
- National Award “Goce Delčev” 2013 for the scientific achievement published in 2012: *Minerals from the Republic of Macedonia with an Introduction to Mineralogy* by authors Gligor Jovanovski, Blažo Boev, Petre Makreski; Publisher MANU, Skopje.
- Charter as a Gratitude for Development and Advancement of Educational and Scientific Activities at the “SS Cyril and Methodius” University, Skopje.
- Recognition for Particular Merit for Development of the Faculty of Science in Skopje
- Member of the Society of Chemists and Technologists of Macedonia
- Member of the Croatian Crystallographic Association

### **Member of the Macedonian Academy of Science and Arts (MASA) (2006)**

#### **Publications**

- Number of published scientific papers: 178 (9 reviews) (122 in journals with IF)
- Number of published professional papers: 20
- Number of communications to scientific meetings: 211 (10 invited lectures)
- Number of books: 2
- Number of monographs: 4
- Number of citations in SCI: 1931

**Realized Scientific Projects:** 44 (11 principal investigator)

**Current Scientific Projects:** 4 (1 principal investigator)

#### **Reviewer of manuscripts in the following journals:**

- *Vibrational Spectroscopy*
- *Physical Chemistry Chemical Physics*
- *Structural Chemistry*
- *Inorganica Chimica Acta*

- *Journal of Molecular Structure*
- *Journal of Raman Spectroscopy*
- *Crystal Growth & Design*
- *European Journal of Mineralogy*
- *Spectrochimica Acta A*
- *Thermochimica Acta*
- *Journal of Thermal Analysis and Calorimetry*
- *Croatica Chemica Acta*
- *Chemical Sciences Journal*
- *ISRN Spectroscopy*
- *Advances in Material Science and Engineering*
- *Bulletin of Chemists and Technologists of Macedonia*
- *Macedonian Journal of Chemistry and Chemical Engineering*
- *Contributions - Macedonian Academy of Sciences and Arts*
  - *Section of Medical and Biotechnical Sciences*
  - *Section of Mathematical and Technical Sciences*

## Reviewer of books: 12

## Selected Scientific Papers

- 1.1. D. Grdenić, B. Kamenar, B. Korpar-Čolig, M. Sikirica and G. Jovanovski, Tetrakis(trifluoroacetoxymcuri)methane and Tetrakis(acetoxymcuri)methane as the Reaction Products of Hofmann's Base with the Corresponding Acid: X-ray Crystallographic Evidence, *J. Chem. Soc., Chem. Comm.* **646** (1974).
- 1.2. G. Jovanovski, B. Kamenar, Two Ionic Saccharinates: (1a) Sodium Saccharinate 2/3 Hydrate,  $C_7H_4NO_3SNa \cdot 2/3H_2O$ ; (1b) Magnesium Disaccharinate Heptahydrate,  $(C_7H_4NO_3S)_2Mg \cdot 7H_2O$ , *Cryst. Struct. Comm.* **11**, 247 (1982).
- 1.3. B. Kamenar, G. Jovanovski, Manganese(II) Saccharinate Hexahydrate,  $Mn(C_7H_4NO_3S)_2 \cdot 6H_2O$ , and Isomorphism with the Analogous Fe, Co, Ni, Zn and Cd Complexes, *Cryst. Struct. Comm.* **11**, 257 (1982).
- 1.4. B. Kamenar, G. Jovanovski, D. Grdenić, Mercury(II) Saccharinate,  $Hg(C_7H_4NO_3S)_2$ , *Cryst. Struct. Comm.* **11**, 263 (1982).
- 1.5. D. Grdenić, B. Kamenar, B. Korpar-Čolig, M. Sikirica, G. Jovanovski, Tetrakis(trifluoroacetoxymcuri)methane,  $C(HgOCOCF_3)_4$ , *Cryst. Struct. Comm.* **11**, 565 (1982).
- 1.6. G. Jovanovski, B. Šoptrajanov, Spectra-Structure Correlations in the Isomorphous Series of Metal(II) Saccharinates Hexahydrates, *J. Mol. Struct.* **143**, 159 (1986).
- 1.7. L. Šoptrajanova, B. Šoptrajanov, G. Jovanovski, Infrared Spectra of *cis*-[Pd(CN)<sub>2</sub>(NH<sub>3</sub>)<sub>2</sub>], *J. Mol. Struct.* **142**, 63 (1986).
- 1.8. M. Penavić, L. Šoptrajanova, G. Jovanovski, B. Šoptrajanov, *cis*-Diamminedicianopalladium(II), *Acta Crystallogr.*, **C42**, 1283 (1986).
- 1.9. O. Grupče, G. Jovanovski, Polymorphism in Thiosaccharin, *Vestn. Slov. Kem. Druš.* **33**, 53 (1986).
- 1.10. G. Jovanovski, J. Thomas, I. Olovsson, A Deformation Electron Density of Potassium Oxalate Monohydrate at 100 K, *Acta Crystallogr.* **B43**, 85 (1987).
- 1.11. G. Jovanovski, A. Hergold-Brundić, B. Kamenar, Structure of Lead(II) Disaccharinate Monohydrate, *Acta Crystallogr.* **C44**, 63 (1988).
- 1.12. G. Jovanovski, B. Kamenar, G. Ferguson, B. Kaitner, Structure of Chloromercury(II) Saccharinate, *Acta Crystallogr.* **C44**, 616 (1988).

- 1.13. G. Jovanovski, B. Šoptrajanov, Bonding of the Carbonyl Group in Metal Saccharinates: Correlation with the Infrared Spectra, *J. Mol. Struct.* **174**, 467 (1988).
- 1.14. A. Hergold-Brundić, B. Kamenar, G. Jovanovski, Structure of the 1:1 Complex of Mercury(II) Saccharinate with Bipyridyl, *Acta Crystallogr.* **C45**, 556 (1989).
- 1.15. G. Jovanovski, O. Grupče, B. Šoptrajanov, The O-H and O-D Stretching Vibrations in the Hydrates of Sodium and Potassium Saccharinate : Spectra-Structure Correlations, *J. Mol. Struct.* **219**, 61 (1990).
- 1.16. M. Penavić, G. Jovanovski, O. Grupče, Crystal Structure of Sodium Thiosaccharinate Monohydrate, *Acta Crystallogr.* **C46**, 2341 (1990).
- 1.17. G. Jovanovski, B. Šoptrajanov, B. Kamenar, Spectra-Structure Correlations in Some Metal Saccharinates, *Bull. Chem. Technol. Macedonia*, **8**, 47 (1990).
- 1.18. M. Penavić, O. Grupče, G. Jovanovski, Crystal Structure of Potassium Thiosaccharinate Monohydrate, *Acta Crystallogr.* **C47**, 1821 (1991).
- 1.19. A. Hergold-Brundić, O. Grupče, G. Jovanovski, Structure of Bis(2,2'-Bipyridyl)(Saccharinato-N)Copper(II) Saccharinate Dihydrate, *Acta Crystallogr.* **C47**, 2659 (1991).
- 1.20. E. Kleinpeter, D. Strohl, G. Jovanovski, B. Šoptrajanov, Metal-to-Ligand Bonding in Some Metal Saccharinates: A <sup>13</sup>C NMR Study, *J. Mol. Struct.* **246**, 185 (1991).
- 1.21. B. Kaitner, G. Jovanovski, I. Janev, Structure of 3,4-Dihydroxy-1,6-Diphenyl-2,4-Hexadiene-1,6-Dione (I) and its 1,6-di-*p*-Tolyl Analogue (II), *Acta Crystallogr.* **C48**, 127 (1992).
- 1.22. B. Kaitner, G. Jovanovski, I. Janev, Structure of 2,3-Diphenacylquinoxaline, *Acta Crystallogr.* **C48**, 129 (1992).
- 1.23. O. Grupče, G. Jovanovski, B. Šoptrajanov, Monohydrates of the Thiosaccharinates of Sodium and Potassium: Spectra-Structure Correlations, *J. Mol. Struct.* **267**, 197 (1992).
- 1.24. M. Trajkovska, B. Šoptrajanov, G. Jovanovski, T. Stafilov, Vibrational Spectra of Some Sulfide Minerals From Alšar, *J. Mol. Struct.* **267**, 191 (1992).
- 1.25. S. Tančeva, G. Jovanovski, B. Šoptrajanov, Infrared Spectra of Protiated and Deuterated Lead(II) Saccharinate Monohydrate: Spectra-Structure Correlations, *Spectrosc. Lett.* **25**(7), 927 (1992).
- 1.26. G. Jovanovski, B. Šoptrajanov, B. Kaitner, L. Prangova, Structural Studies of Some *o*-Substituted S-Phenyl Thiobenzoates: I. Crystal Structure of S-Phenyl *o*-Chlorothiobenzoate and S-Phenyl *o*-Bromothiobenzoate, *J. Crystallogr. Spectrosc. Res.* **23**, 1, 49 (1993).
- 1.27. O. Grupče, G. Jovanovski, B. Šoptrajanov, The N-H, N-D and C=S Stretching Regions in the Infrared Spectrum of Thiosaccharin : Comparison with the Spectrum of Saccharin, *J. Mol. Struct.* **293**, 113 (1993).
- 1.28. B. Šoptrajanov, M. Trajkovska, I. Gržetić, G. Jovanovski, T. Stafilov, Infrared Spectra of M<sup>I</sup><sub>3</sub>M<sup>III</sup>S<sub>3</sub> Type Synthetic Minerals (M<sup>I</sup> = Tl or Ag, M<sup>III</sup> = As or Sb), *N. Jb. Miner. Abh.* **166**/1, 83 (1993).
- 1.29. S. Tančeva, G. Jovanovski, B. Šoptrajanov, Infrared Spectrum of Silver Saccharinate: Structural Inferences, *Bull. Chem. Technol. Macedonia*, **12**, 11 (1993).
- 1.30. O. Grupče, G. Jovanovski, V. Mirčeski, Spectra-Structure Correlations in 2,2'-Bipyridine Mercury(II) Saccharinate: Comparison with Mercury(II) Saccharinate and Chloromercury(II) Saccharinate, *Spectrosc. Lett.* **27**, 691 (1994).
- 1.31. O. Grupče, M. Penavić, G. Jovanovski, Structural Study of Thiosaccharin by Single Crystal X-Ray Diffraction and Infrared Spectroscopy, *J. Chem. Crystallogr.* **24**, 581 (1994).
- 1.32. B. Šoptrajanov, M. Trajkovska, G. Jovanovski, T. Stafilov, Infrared Spectra of Lorandite and Some Other Minerals From Alšar, *N. Jb. Miner. Abh.* **167**, 329 (1994).
- 1.33. G. Jovanovski, S. Tančeva, B. Šoptrajanov, The SO<sub>2</sub> Stretching Vibrations in Some Metal Saccharinates : Spectra-Structure Correlations, *Spectrosc. Lett.* **28**, 1095 (1995).

- 1.34. G. Jovanovski, D. Spasov, S. Tančeva, B. Šoptrajanov, Structural Characteristics of the Hydrates of the Saccharinates of Calcium, Strontium and Barium, *Acta Chim. Slov.* **43**, 41 (1996).
- 1.35. O. Grupče, G. Jovanovski, V. Mirčeski, Structural Characteristics of 2,2'-bipyridine Saccharinato Complexes with Cobalt(II), Nickel(II) and Zinc(II), *Bull. Chem. Technol. Macedonia*, **15**, 87 (1996).
- 1.36. B. Šoptrajanov, G. Jovanovski, V. Stefov, I. Kuzmanovski, Vibrational Spectra of Magnesium Hydrogenphosphate Trihydrate and of its Manganese Analogue, *Phosphorus, Sulfur and Silicon*, **111**, 9 (1996).
- 1.37. B. Šoptrajanov, M. Trajkovska, T. Stafilov, G. Jovanovski, I. Gržetić, Infrared Spectra of Three  $M^I M^{III} S_2$  Type Synthetic Minerals ( $M^I = \text{Ag}$  or  $\text{Tl}$ ,  $M^{III} = \text{Sb}$  or  $\text{As}$ ), *Spectrosc. Lett.* **30**, 79 (1997).
- 1.38. G. Jovanovski, S. Pocev, B. Kaitner, Crystal Structure of Magnesium Potassium Phosphate Monohydrate,  $\text{MgKPO}_4 \times \text{H}_2\text{O}$ , *Bull. Chem. Technol. Macedonia*, **16**, 59 (1997).
- 1.39. O. Grupče, G. Jovanovski, Infrared Spectra of Protiated and Deuterated Lead(II) 2,2'-bipyridine Saccharinato Monohydrate, *J. Mol. Struct.* **408/409**, 333 (1997).
- 1.40. Lj. Pejov, G. Jovanovski, O. Grupče, B. Šoptrajanov, The Influence of Inherent Pseudo Jahn-Teller Instability on the Stretching Vibrations of Water Molecules in the Isomorphous Metal(II) Saccharinate Hexahydrates, *J. Mol. Struct.* **410-411**, 365 (1997).
- 1.41. Lj. Pejov, G. Jovanovski, O. Grupče, B. Šoptrajanov, Infrared Investigation of  $[\text{Cu}(\text{sac})_2(\text{H}_2\text{O})_4] \times 2\text{H}_2\text{O}$  - a Pseudo Jahn-Teller Complex, *Acta Chim. Slovenica*, **44**, 197 (1997).
- 1.42. B. Šoptrajanov, G. Jovanovski, I. Kuzmanovski, V. Stefov, Fourier Transform Vibrational Spectra of Magnesium Hydrogenphosphate Trihydrate. I. The O-H Stretching Region, *Spectrosc. Lett.* **31**, 1191 (1998).
- 1.43. O. Grupče, G. Jovanovski, B. Šoptrajanov, A. Hergold-Brundić, Structure of Bis(2,2'-bipyridyl)(saccharinato)copper(II) Saccharinate Dihydrate. Addendum. *Acta Crystallogr.* **C54**, 890 (1998).
- 1.44. G. Jovanovski, P. Naumov, O. Grupče, B. Kaitner, Structural Study of Monoaquabis(pyridine)bis(saccharinato)copper(II),  $[\text{Cu}(\text{H}_2\text{O})(\text{py})_2(\text{sac})_2]$ , *Eur. J. Sol. St. Inorg. Chem.* **35**, 231 (1998).
- 1.45. G. Jovanovski, P. Naumov, O. Grupče, B. Kaitner, Tetraaquabis(pyridine)metal(II) Saccharinate Tetrahydrate,  $[\text{M}(\text{H}_2\text{O})_4(\text{py})_2](\text{sac})_2 \times 4\text{H}_2\text{O}$ ;  $\text{M} = \text{Co}, \text{Ni}$ , *Eur. J. Sol. St. Inorg. Chem.* **35**, 579 (1998).
- 1.46. P. Naumov, G. Jovanovski, O. Grupče, Fourier Transform Infrared Study of Monoaquabis(pyridine)bis(saccharinato)copper(II): Spectra-Structure Correlations, *J. Mol. Struct.* **482-483**, 121 (1999).
- 1.47. Lj. Pejov, G. Jovanovski, O. Grupče, B. Šoptrajanov, Anharmonicity of Water Stretching Vibrations in Isomorphous Metal(II) Saccharinates Hexahydrates, *J. Mol. Struct.* **482-483**, 115 (1999).
- 1.48. B. Šoptrajanov, V. Stefov, I. Kuzmanovski, G. Jovanovski, Fourier Transform Infrared and Raman Spectra of Manganese Hydrogenphosphate Trihydrate, *J. Mol. Struct.* **482-483**, 103 (1999).
- 1.49. P. Naumov, G. Jovanovski, FT Infrared Spectra of Binuclear Copper(II) Imidazole Saccharinato Complex: Correlation with the Structure, *Spectrosc. Lett.* **32**, 237 (1999).
- 1.50. O. Grupče, G. Jovanovski, B. Kaitner, P. Naumov, Structural Investigation of Di- $\mu$ -chlorobis[saccharinatopyridinemercury(II)] by X-ray Diffraction and FT IR Spectroscopy, *Croat. Chim. Acta*, **72**, 465 (1999).
- 1.51. G. Jovanovski, A. Hergold-Brundić, O. Grupče, D. Matković-Čalogović, Structure of (2,2'-bipyridine)lead(II) Saccharinate Monohydrate, *J. Chem. Crystallogr.* **29**, 233 (1999).
- 1.52. P. Naumov, G. Jovanovski, Infrared Study of the Binuclear Cadmium(II) Imidazole Saccharinato Complex: Comparison with the Copper(II) Compound, *Acta Chim. Slov.* **46**, 389 (1999).
- 1.53. B. Šoptrajanov, V. Stefov, I. Kuzmanovski, G. Jovanovski, Fourier Transform Vibrational Spectra of Magnesium Hydrogenphosphate Trihydrate. II. The 2000 - 370  $\text{cm}^{-1}$  Region, *Spectrosc. Lett.* **32**, 703 (1999).

- 1.54. P. Naumov, G. Jovanovski, V. Jordanovska, B. Boyanov, The Thermal Decomposition of the Pyridine Saccharinates of Co, Ni and Cu: A Correlation of the Structural and the Infrared Data, *J. Serb. Chem. Soc.* **64**, 609 (1999).
- 1.55. G. Jovanovski, Metal Saccharinates and their Complexes with *N*-donor Ligands, *Croat. Chem. Acta*, **73**, 843 (2000).
- 1.56. P. Naumov, G. Jovanovski, On the Geometry of the Saccharinato Ligand/Ion in the Metal Saccharinates: Crystallographic Survey and Theoretical Study, *Struct. Chem.* **11**, 19 (2000).
- 1.57. P. Naumov, G. Jovanovski, Vibrational Study and Spectra-structure Correlations in Ammonium Saccharinate: Comparison with the Alkali Saccharinates, *Spectrochim. Acta A*, **56**, 1305 (2000).
- 1.58. P. Naumov, O. Grupče, G. Jovanovski, Experimental and Theoretical Raman Study of the Binuclear Copper(II) Imidazole Saccharinato Complex, *J. Raman Spectrosc.* **31**, 475 (2000).
- 1.59. P. Naumov, G. Jovanovski, Vibrational Studies of the Solid Imidazole and Pyridine Adducts of Metal(II) Saccharinates. I. The OH/OD and NH/(ND) Stretching Regions of the Cobalt(II) and Ni(II) Complexes, *Sol. St. Scien.* **2**, 249 (2000).
- 1.60. A. Čahil, G. Jovanovski, O. Grupče, Isomorphism in the Thiosaccharinates of Mg, Co(II), Ni(II) and Zn(II): Comparison with the Analogous Metal Saccharinates, *Bull. Chem. Technol. Macedonia*, **19**, 9 (2000).
- 1.61. P. Naumov, G. Jovanovski, S. Abbrent, L.-E. Terenius, Thermal Behaviour of the Saccharinates of K<sup>+</sup>, Na<sup>+</sup>, Rb<sup>+</sup>, Cs<sup>+</sup> and NH<sub>4</sub><sup>+</sup>: Structural Inferences, *Thermochim. Acta*, **359**, 123 (2000).
- 1.62. P. Naumov, G. Jovanovski, Vibrational Study of two Novel Cesium Saccharinates. Spectroscopic Evidence for Organic Molecule Embedded in Ionic Salt, *Vibr. Spectrosc.* **24** 201 (2000).
- 1.63. P. Naumov, G. Jovanovski, On the Coordination in Metal Saccharinates, *J. Coord. Chem.* **54**, 63 (2001).
- 1.64. P. Naumov, G. Jovanovski, Outer-sphere Coordination, *N*-coordination and *O*-coordination of the Deprotonated Saccharin in copper(II) Saccharinato Complexes. Implications for the Saccharinato Carbonyl Stretching Frequency, *Inorg. Chim. Acta*, **314**, 154 (2001).
- 1.65. Lj. Pejov, B. Šoptrajanov, G. Jovanovski, Very Low H-O-H Bending Frequencies. II. Quantum Chemical Study of the Water Bending Potential in Compounds of the MgKPO<sub>4</sub> H<sub>2</sub>O Type, *J. Mol. Struct.* **563-564**, 321 (2001).
- 1.66. P. Naumov, G. Jovanovski, Spectra-structure Correlations in Solid Metal Saccharinates. I. The Carbonyl Stretchings, *J. Mol. Struct.* **563-564**, 335 (2001).
- 1.67. P. Naumov, G. Jovanovski, A. Todorovska, Vibrational Studies of the Solid Imidazole and Pyridine Adducts of Metal(II) Saccharinates. II. Mn(II) and Fe(II) Imidazole Saccharinates, *J. Mol. Struct.* **563-564**, 341 (2001).
- 1.68. P. Naumov, V. Jordanovska, O. Grupče, B. Boyanov, G. Jovanovski, Thermal Behaviour of the *N*-donor Adducts of Metal Saccharinates. I. 2,2'-bipyridine Saccharinato Complexes of Co(II), Ni(II), Cu(II), Zn(II) and Pb(II), *J. Therm. Anal. Cal.* **65**, 59 (2001).
- 1.69. P. Naumov, V. Jordanovska, O. Grupče, B. Boyanov, G. Jovanovski, Thermal Behaviour of the *N*-donor Adducts of Metal Saccharinates. II. 1,10-phenantroline Saccharinato Complexes of Co(II), Ni(II), Cu(II), Zn(II) and Pb(II), *J. Therm. Anal. Cal.* **65**, 871 (2001).
- 1.70. G. Jovanovski, B. Šoptrajanov, L. Prangova, Lj. Pejov, *Ab initio* HF SCF and Fourier Transform Infrared Study of the Structure and Vibrational Force Field in Two *o*-substituted *S*-phenyl Thiobenzoates, *Commun. Math. Comp. Chem.* **42**, 287 (2001).
- 1.71. P. Naumov, G. Jovanovski, An Update to the Combined Vibrational-Diffraction Experimental and Theoretical Studies of Small Biologically Important Cyclic Imides: Reference to Saccharin, *Curr. Org. Chem.* **5**, 1059 (2001).
- 1.72. P. Naumov, V. Jordanovska, B. Boyanov, G. Jovanovski, Thermal Behaviour of the *N*-donor Adducts of Metal Saccharinates. III. Imidazole Saccharinates of Co(II), Ni(II) and Cd(II), *J. Therm. Anal. Cal.* **66**, 469 (2001).

- 1.73. P. Naumov, G. Jovanovski, S.-Z. Hu, I.-H. Suh, I. A. Razak, S. Chantrapromma, H.-K. Fun, S. W. Ng, On the Short Carbonyl Bond in Bis[ $\square$ -1,2-benzisothiazol-3(2*H*)-one 1,1-dioxido-*k*<sup>2</sup>*N*:*O*] $\square$ [bis-1,2-benzisothiazol-3(2*H*)-one 1,1-dioxido-*k**N*]-bis(imidazole)copper(II)  $\checkmark$ , *Acta Crystallogr. C* **57**, 1016 (2001).
- 1.74. G. Jovanovski, P. Naumov, Chemistry in Macedonia, *Bull. Chem. Technol. Maced.* **20**, 157 (2001).
- 1.75. O. Grupče, G. Jovanovski, B. Kaitner, P. Naumov, Monoaquabis(2,2'-bipyridine)saccharinatozinc(II) Saccharinate. I. Structural Study by Single Crystal X-ray Diffraction, FT IR Spectroscopy and DS Calorimetry, *J. Struct. Chem.* **42**, 926 (2001).
- 1.76. S. Cakir, P. Naumov, I. Bulut, E. Bicer, O. Cakir, G. Jovanovski, I. A. Razak, S. Chantrapromma, H.-K. Fun, S. W. Ng, Diaquabis(nicotinamide)bis(*o*-sulfo benzimidato-*N*)cadmium(II), *Acta Crystallogr.* **E57**, m431 (2001).
- 1.77. P. Naumov, G. Jovanovski, J. V. Hanna, I. A. Razak, S. Chantrapromma, H.-K. Fun, S. W. Ng, Diaquabis(4,4'-bipyridine)copper(II) di(*o*-sulfo benzimidate) Dichloromethane Solvate, a Two-dimensional Cu<sub>4</sub>(4,4'-C<sub>5</sub>H<sub>4</sub>NC<sub>5</sub>H<sub>4</sub>N)<sub>4</sub> Rhombic Grid Clathrating Guest Dichloromethane, *Inorg. Chem. Commun.* **4**, 766 (2001).
- 1.78. P. Naumov, G. Jovanovski, A. Todorovska, Vibrational Studies of the Solid Imidazole and Pyridine Adducts of Metal(II) Saccharinates. III. Zn and Hg(II) Imidazole Saccharinates, *Spectrochim. Acta A*, **58**, 1903 (2002).
- 1.79. P. Naumov, G. Jovanovski, Y. Ohashi, Spectra-Structure Correlations in Solid Saccharinates. II. *Ab Initio* Molecular Structures and Vibrational Spectra of *N*-substituted Saccharins at the HF Level, *Sol. St. Scien.* **4**, 271 (2002).
- 1.80. P. Naumov, G. Jovanovski, S. W. Ng, Aquabis(2,4'-bipyridine)di(*o*-sulfo benzimidato)copper(II) at 95 K, *Acta. Crystallogr.* **E58**, m16 (2002).
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