



**Professor Victor-Emanuel Sahini**



## PROFESSOR VICTOR-EMANUEL SAHINI AT HIS 80th ANNIVERSARY

On the 30th August 2007, Professor Victor-Emanuel Sahini celebrates his 80th anniversary.

Professor Sahini was born and spent his childhood and first school years in Galați. Moving with the family to Bucharest, he graduated the "Gh. Lazar" high school and became a student at the Faculty of Chemistry, University of Bucharest. He graduated in 1950 as a brilliant student, and became assistant in the Department of Physical Chemistry of the Faculty of Chemistry at the University of Bucharest. This was the beginning of a nearly 60 years of teaching activity in the same laboratory, being successively lecturer (1955), assistant professor (1962) and full professor (1968).

He prepared and defended in 1962 a PhD thesis entitled "Contributions to the theory of coordinative bond" under the supervision of Professor I.G. Murgulescu, member of the Roumanian Academy, the founder of the Department of Physical Chemistry at the University of Bucharest.

The teaching activity of Professor Sahini was devoted especially to the new modern topics of Physical Chemistry, which, after his interesting and rigorous lectures, became familiar and was enthusiastically followed by many students. He gave for the first time lectures on Physico-chemical analysis (1952) and Quantum Chemistry (1954) at the University of Bucharest.

For about six decades he gave lectures on Molecular Structure and Spectroscopy, Biological Physical Chemistry, Electrochemistry and Colloid Chemistry at the Faculties of Chemistry, Biology and Geology of the University of Bucharest, as well as at the Military Technical Academy. In the period 1974-1990, when the Faculty of Chemistry was abusively included in the Polytechnic Institute of Bucharest, Professor Sahini gave, for several years, lectures of General Chemistry for the students in the first year of the Faculties of Electronics and Automatics.

The large variety of teaching fields, the high quality of his lectures, based on a solid scientific culture, his calm and understanding attitude towards students and young assistants, were deeply appreciated by more than 50 series of students, now teachers or researchers in different fields of chemistry, in Roumania or abroad. About 30 PhD students passed their thesis under the supervision of Professor Sahini.

The research activity of Professor V. E. Sahini was focused on quantum chemistry and molecular structure and spectroscopy. He had the opportunity of two assignments in the teams of Professors I. K. Syrkin and Dyatkina at the Moscow Institute of Chemistry (1960), and at the Department of Theoretical Chemistry in Cambridge (U.K) with Professor H.C. Longuet-Higgins (1962).

He divided his scientific research activity between the Department of Physical Chemistry at the University of Bucharest and the Center of Physical Chemistry of the Roumanian Academy, later in the "Ilie Murgulescu" Institute of Physical Chemistry of the Roumanian Academy, where he was successively head of the Laboratory of Quantum Chemistry and Molecular Spectroscopy and scientific director. Since 1996 he has been honorary director of the "Ilie Murgulescu" Institute of Physical Chemistry of the Roumanian Academy.

Professor Sahini participated intensively at the scientific and academic life in Roumania, being vice-rector of the University of Bucharest (1970-72), member of the United Nations University Council (1974-1977). In the period 1980-1994 he exerted, besides his teaching and academic duties, the function of Director of the Library of the Roumanian Academy. Since the foundation in 1964 of *Revue Roumaine de Chimie*, the most important scientific journal in chemistry in Roumania, he was, till the end of 1991, Vice-Editor-in-Chief.

Due to his remarkable scientific activity, Professor Sahini was elected full member of the Roumanian Academy in 1990 (having been a corresponding member since 1963). He is the president of the Spectroscopy Commission and of the Commission of Quantum Chemistry of the Roumanian Academy. Professor Sahini contributed intensively to the development of Physical Chemistry in Roumania and to its promotion in the international scientific community, being one of the most active Scientific Secretaries in the Organising Committee of the National Conferences of Physical Chemistry since 1968 until the present.

The research activity of Professor Sahini, developed in the fields of molecular structure and spectroscopy, quantum chemistry and biophysical chemistry, is characterized by the diversity of subjects and techniques, by the rigorousness of the experimental methods employed, and of the theoretical interpretations of the results. This fruitful scientific activity is illustrated by three books and about 150 papers published in prestigious international journals, frequently cited in the physical chemistry literature.

The main directions of research in which Professor Sahini has important creative contributions are the followings:

**Molecular structure and spectral properties of different classes of compounds, in connection with their electronic structure calculations using quantum chemistry methods.** In fact, he has initiated in Roumania the application of quantum chemistry methods to various problems in chemistry. In this respect, several classes of aromatic and heterocyclic compounds were investigated by IR, Raman, UV-VIS, ESR and NMR spectral techniques and the results were correlated with MO theoretical calculations (HMO, SCF-PPP-CI, EHT).

**The radical anions and radical cations** of different heteroaromatic compounds were investigated by combined spectral techniques (ESR, UV-VIS, IR) and their reactivity was discussed in terms of spin density and electronic structure calculations using appropriate quantum chemistry open-shell methods.

**The charge transfer complexes** and coordination compounds of some hetero- aromatic molecules with different acceptors were studied by spectrophotometry and the experimental properties were interpreted in the frame of a perturbation treatment.

**Molecular and ionic interactions:** A group of papers was devoted to the study of solvent effects in the electronic and vibrational spectra of some carbonyl compounds and the results were correlated with MO calculations. An interferometric method for the study of ionic interactions in diluted aqueous solutions was developed.

**Force constant computations** from the study of the IR spectra, applying a modified Urey-Bradley force field.

**Gaseous-phase radicals**, obtained by fragmentation processes of different organic molecules, studied by mass-spectrometry, the results being interpreted in terms of the electronic structure of the parent compounds.

Another research direction, initiated in the Department of Physical Chemistry by Professor V. E. Sahini and Professor Tatiana Oncescu, was developed especially in the last decades and may be designed under the generic name of **Biophysical Chemistry**. In this respect, the electronic structure data and the physico-chemical properties of several classes of compounds (drugs, pollutants) were correlated with their biological or toxic activity. A molecular orbital modeling of some processes involved in  $\gamma$ -irradiated nucleotides and lignin was proposed.

A significant part of Professor's Sahini scientific activity was devoted to some applicable aspects of physical chemistry. As a member of a chemical-pharmaceutical research team, he participated to the preparation of a new-patented drug, **Romener**, and initiated a method of photochemical synthesis of D2-vitamin. In the last years an important group of papers was devoted to the study of the thermal folding processes of proteins, as evidenced by different physico-chemical properties.

During the six decades of academic and scientific work, Professor V. E. Sahini created strong research teams in the Institute of Physical Chemistry of the Roumanian Academy and in the Department of Physical Chemistry at the University of Bucharest, in order to continue and develop his pioneering activity in the field of theoretical chemistry, molecular structure, spectroscopy and biophysical chemistry.

Professor Sahini is a man of considerable culture, his interest going from history to arts, from philosophy to literature. His kind and equilibrated personality was highly appreciated by all his students and coworkers and induced a pleasant and stimulating working atmosphere and collaboration in his team, at the university, as well as at the Institute of Physical Chemistry.

Now, at the age of 80 years, Professor Sahini is an active and prestigious presence of the University of Bucharest and of the academic community in Roumania, a model as a professor and as a scientist for the young students and researchers. We all wish him, friends and colleagues, a long, healthy and productive life and new accomplishments in his activities.

HAPPY ANNIVERSARY, Professor Sahini!

*The Editorial Board*

## LIST OF PUBLICATIONS

## BOOKS

1. D. Bârcă-Gălățeanu, M. Giurgea, I. Iova, V. E. Sahini, A. Truția și R. Țițeica, "Introducere în spectroscopia experimentală", Ed. Tehnică, București, 1966.
2. I. G. Murgulescu și V. E. Sahini, "Introducere în chimia fizică", vol. I, 2 "Structura și proprietățile moleculelor", Ed. Academiei, București, 1975.
3. V. E. Sahini și M. Hillebrand, "Chimie cuantică", Ed. Academiei, București, 1985.

## PAPERS

1. V. E. Sahini, "Asupra unor relații între electronegativitatea și refracția atomică a elementelor", *Anal. Univ. C. I. Parhon, Seria St. Nat.*, **1957**, 13, 85.
2. I. G. Murgulescu și V. E. Sahini, "Despre refracțiile ionilor. III", *Stud. Cercet. Chim.*, **1959**, 1, 15.
3. I. G. Murgulescu et V. E. Sahini, "Spectre d'absorption dans l'infrarouge de quelques oxalates complexes", *Revue Universelle des Mines*, **1959**, 5, 1.
4. V. E. Sahini, M. Leonte et E. Keplinger, "Contributions à l'étude des hydrazones de l'aldéhyde formique", *Anal. Univ. "Al. I. Cuza" - Iasi*, **1959**, 5, 167.
5. A. T. Balaban, V. E. Sahini and E. Keplinger, "Electronic absorption spectra of alkyl- and phenyl-substituted pyrylium salts", *Tetrahedron*, **1960**, 9, 163.
6. V. E. Sahini și Z. Simon, "Studiul spectral în infraroșu al izomeriei *cis-trans* la combinațiile coordinative. II", *Stud. Cercet. Chim.*, **1961**, 3, 573.
7. V. E. Sahini, M. Feldman și I. Pîrcălăbescu, "Spectrele de absorbție în infraroșu ale cloraților unor metale". *Anal. Univ. C. I. Parhon, Seria St. Nat.*, **1961**, 30, 43.
8. V. E. Sahini, "Asupra legăturii de coordinare în complecșii oxalici de crom, mangan, fier și cobalt din date spectrale în infraroșu", *Anal. Univ. C. I. Parhon, Seria St. Nat., Chimie*, **1961**, 30, 49.
9. I. G. Murgulescu, V. E. Sahini și L. Bolfa, "Studiul spectral în infraroșu al izomeriei *cis-trans*. I", *Stud. Cercet. Chim.*, **1961**, 4, 585.
10. T. Oncescu și V. E. Sahini, "Studiul spectral în infraroșu al izomeriei *cis-trans*. III", *Stud. Cercet. Chim.*, **1961**, 4, 663.
11. V. E. Sahini, "Sur la stabilité des hydrocarbures aromatiques condensés. I", *J. Chim. Phys.*, **1962**, 21, 177.
12. V. E. Sahini, "Sur le caractère ionique de la liaison coordinative", *Rev. Chim. (Bucharest)*, **1962**, 1, 495.
13. V. E. Sahini, "Sur la stabilité des hydrocarbures aromatiques condensés. II", *Rev. Chim. (Bucharest)*, **1962**, 2, 1265.
14. V. E. Sahini and M. Damaschin, "On the vibration frequencies of the coordinated carbonic anion", *Rev. Chim. (Bucharest)*, **1963**, 2, 193.
15. I. G. Murgulescu, V. E. Sahini, M. Segal și M. Damaschin, "Spectre de vibrație și structura complecșilor tiosulfatului de cupru și argint", *Stud. Cercet. Chim.*, **1964**, 12, 27.
16. V. E. Sahini, "Asupra stabilității hidrocarburilor aromatice condensate. III", *Rev. Chim. (București)*, **1964**, 4, 551.

17. L. Ciurea, V. E. Sahini and C. Volanschi, "Absorption spectra of some metal-ketyls", *Rev. Roum. Chim.*, **1964**, *9*, 819.
18. I. G. Murgulescu, V. E. Sahini and A. Greff, "The influence of solvents on the electronic absorption spectra of substituted aromatics" in "Molecular Structure and Spectroscopy", Science Council of Japan, Tokyo, 1962, p. 108.
19. V. E. Sahini and A. O. Fulea, "About the evaluation of the force constants of some tetrahedral molecules", *Rev. Roum. Chim.*, **11**, 1045 (1966).
20. V. E. Sahini, R. Beldie und M. Damaschin, "Raman spektrum der freien und koordinierten Oxalate", *Rev. Roum. Chim.* **1966**, *11*, 1361.
21. V. E. Sahini, V. Beldie, S. Verzea și H. Bednar, "O nouă metodă de prezentare a orbitalelor", *Rev. Fiz. Chim. Seria A*, **1966**, *III*, 9.
22. V. E. Sahini, C. I. Ghirvu and V. C. Macovei, "On the electronic structure and spectrum of the benzenesulphonate anion", *Rev. Roum. Chim.*, **1967**, *12*, 237.
23. V. E. Sahini and V. Brezuleanu, "SCF-MO calculation of the electronic energy levels of  $[\text{Co}(\text{NH}_3)_6]^{3+}$ ", *Rev. Roum. Chim.*, **1967**, *12*, 367.
24. V. E. Sahini, E. Keplinger and M. Hillebrand, "On electronic absorption spectra of nitrophenols", *Rev. Roum. Chim.*, **1967**, *12*, 361.
25. V. E. Sahini, L. Ciurea and E. Volanschi, "Spectral study of some metal ketyls", *Rev. Roum. Chim.*, **1967**, *12*, 355.
26. A. Caragheorgheopol, M. Hartmann, R. Kuhmstedt and V. E. Sahini, "Electron spin resonance spectra of some iminoxy-radicals", *Tetrahedron Letters*, **1967**, *42*, 4161.
27. V. E. Sahini, V. Constantin et C. Podină, "L'étude des toluidines par spectrométrie de masse", *Rev. Roum. Chim.*, **1967**, *12*, 1405.
28. V. E. Sahini and C. I. Ghirvu, "A Pariser-Parr treatment of substituted benzenes in the approximation of inductive model. I", *Rev. Roum. Chim.*, **1968**, *13*, 851.
29. V. E. Sahini and M. Feldman, "Solvent effects of benzophenone infrared spectrum", *Rev. Roum. Chim.*, **1968**, *13*, 527.
30. V. E. Sahini, T. Pirtea and A. Butucelea, "Visible absorption spectrum of uranyl nitrate hexahydrate", *Rev. Roum. Chim.*, **1968**, *13*, 985.
31. V. E. Sahini and V. Brezuleanu, "On tetracoordinated complexes", *Rev. Roum. Chim.*, **1968**, *13*, 1119.
32. V. E. Sahini et V. Mincu, "Sur l' applicabilité de la méthode Gouy aux poudres", *Univ. C. I. Parhon, Seria St. Nat.*, **1968**, *2*, 33.
33. S. Dumitrescu, C. I. Ghirvu, C. Simionescu et V. E. Sahini, "Etude de la polymérisation des dérivés acétyléniques. II", *Bul. Inst. Politeh. Iași*, **1968**, *XIV*, 1.
34. V. E. Sahini and A. O. Fulea, "The force constants of  $\text{PH}_4^+(\text{Td})$ ", *Rev. Roum. Chim.*, **1969**, *14*, 17.
35. V. E. Sahini and L. Telea, "On the electronic spectra of Co(III) halogeno-pentaamines", *Rev. Roum. Chim.*, **14**, 157 (1969).
36. V. E. Sahini and C. I. Ghirvu, "On the electronic structure and spectra of the monosubstituted naphthalenes", *Rev. Roum. Chim.*, **1969**, *14*, 275.
37. R. Beldie and V. E. Sahini, "Raman spectra of beryllium oxalate complexes", *Rev. Roum. Chim.*, **1969**, *14*, 419.
38. V. E. Sahini and L. Ciurea, "Electron spin resonance spectra of some aromatic metal ketyls", *Rev. Roum. Chim.*, **1969**, *14*, 689.

39. V. E. Sahini and M. Olteneanu, "Solvent effect on the infrared spectra of benzophenone and anthrone", *Rev. Roum. Chim.*, **1969**, *14*, 831.
40. V. E. Sahini and Al. Butucelea, "On the  $n-\pi^*$  electronic transition in aromatic ketones", *Rev. Roum. Chim.*, **1969**, *14*, 981.
41. M. Hillebrand, O. Maior, V. E. Sahini and E. Volanschi, "Spectral study of some phenoxathiin derivatives and their positive ions", *J. Chem. Soc., (B)*, **1969**, 775.
42. V. E. Sahini and L. Ciurea, "Electronic spectra of some aromatic metal ketyls", *Rev. Roum. Chim.*, **1969**, *14*, 1093.
43. V. E. Sahini and C. I. Ghirvu, "Pariser-Parr treatment of substituted benzenes. II", *Rev. Roum. Chim.*, **1970**, *15*, 11.
44. M. Hillebrand, O. Maior and V. E. Sahini, "Charge transfer heterocomplexes of the aromatic heterocycles. I", *Rev. Roum. Chim.*, **1970**, *15*, 149.
45. V. E. Sahini, C. Podină et V. Constantin, "L' étude des picolines par spectrométrie de masse". *Rev. Roum. Chim.*, **1970**, *15*, 495.
46. A. Gioabă, V. E. Sahini and E. Volanschi, "Charge transfer complexes of the aromatic heterocycles. II", *Rev. Roum. Chim.*, **1970**, *15*, 309.
47. A. Gioabă, V. E. Sahini and E. Volanschi, "Spectral study of phenoxatellurine and some of its derivatives", *Rev. Roum. Chim.*, **1970**, *15*, 501.
48. V. E. Sahini and M. Craiu, "Depolarisation ratio of the Raman lines of molecules containing carbonyl group", *Rev. Roum. Chim.*, **1970**, *15*, 675.
49. V. E. Sahini and M. Dobrescu, "On the carbonyl stretching frequency of halogen-substituted benzophenones". *Rev. Roum. Chim.*, **1970**, *15*, 679.
50. V. E. Sahini and M. Craiu, "Raman spectrum of acetophenone. II", *Bul. Inst. Politeh. Iași*, **1970**, *XVI*, 183.
51. V. E. Sahini and C. I. Ghirvu, "Pariser-Parr treatment of substituted benzenes. III", *Rev. Roum. Chim.*, **1971**, *16*, 149.
52. V. E. Sahini and C. I. Ghirvu, "Charge transfer study on the electronic structure and spectra of the monosubstituted naphthalenes", *Rev. Roum. Chim.*, **1971**, *16*, 321.
53. V. E. Sahini and V. Tufoi, "SCF-MO calculation of the electronic energy levels of  $[\text{Co}(\text{NH}_3)_5\text{Cl}]^{2+}$ ", *Rev. Roum. Chim.*, **1971**, *16*, 789.
54. V.E. Sahini, M. Dobrescu and C. Bendic, "Electronic structure and electronic spectra of carbazole positive ions", *Rev. Roum. Chim.*, **1971**, *16*, 1131.
55. M. Hillebrand, O. Maior and V. E. Sahini, "Radical cation-dimer equilibrium in strongly acidic solutions of phenoxaselenine". *Rev. Roum. Chim.*, **1971**, *16*, 1489.
56. V. E. Sahini and J. Weinberg, "Electronic structure of xylidine isomers", *Anal. Univ. Bucharest*, **1971**, *2*, 19.
57. V. E. Sahini and L. Ciurea, "Infrared spectra of carbonyl aromatic ion radicals. I", *Rev. Roum. Chim.*, **1972**, *17*, 273.
58. V. E. Sahini, V. Tufoi and A. Ivanov, "Considerations about the stability of complex combinations of cobalt", *Rev. Roum. Chim.*, **1972**, *17*, 617.
59. H. Căldăraru, A. Caragheorgheopol and V. E. Sahini, "Electron spin resonance study of the iminoxy-radicals of some pyrimidine derivatives", *J. Magnetic Resonance*, **1973**, *11*, 335.
60. A. Gioabă, V. E. Sahini and E. Volanschi, "NMR spectra of some phenoxatellurine derivatives". *Rev. Roum. Chim.*, **1973**, *18*, 531.



61. V. E. Sahini and M. Olteanu, "Solvent effect on the anharmonicity of the C=O vibration of acetophenone and benzophenone", *Rev. Roum. Chim.*, **1973**, *18*, 361.
62. M. Dobrescu, M. Ciureanu and V. E. Sahini, "A perturbation treatment of molecular complexes. III", *Rev. Roum. Chim.*, **1973**, *18*, 921.
63. V. E. Sahini, C. Podină et M. Strul, "Etude des isomeres de la nitroaniline par spectrometrie de masse", *Rev. Roum. Chim.*, **1973**, *18*, 1283.
64. V. E. Sahini and J. Weinberg, "Xilidine isomers. II", *Rev. Roum. Chim.*, **1973**, *18*, 1493.
65. A. Caragheorghopol, H. Căldăraru and V. E. Sahini, "Assignment of proton hyperfine splitting constants in cyclic  $\alpha$ -keto-iminoxy radicals", *Rev. Roum. Chim.*, **1973**, *18*, 1497.
66. V. E. Sahini, M. Craiu and E. Ivana, "Spectrographic determination of traces of copper, lead, chromium, nickel, molybdenum and cobalt in natural waters", *Rev. Roum. Chim.*, **1974**, *19*, 165.
67. C. Simionescu, S. Dumitrescu, T. Lixandru, M. Dăringă, B. Simionescu, M. Viță, V. E. Sahini and J. Weinberg, "Polimeri orto i para-fenil-atsetilena", *Vysokomol. Soedineniya*, tom (A) **1974**, *16*, 7.
68. R. Beldie, A. Butucelea and V. E. Sahini, "The carbon-carbon stretching frequency in ethane, ethane- $d_6$  and ethane- $t_6$ ", *Rev. Roum. Chim.*, **1976**, *21*, 327.
69. R. Grigorovici, A. Butucelea, V. E. Sahini and M. K. Dermond, "Normal coordinate analysis of hexahaloethanes", *Rev. Roum. Chim.*, **1976**, *21*, 965.
70. V. E. Sahini, J. Weinberg and M. Vasilescu, "Xylidine isomers. IV. Dipole moments in the first excited singlet state". *Rev. Roum. Chim.*, **1976**, *21*, 112.
71. L. Ciurea, V. E. Sahini and A. Mateescu, "Spectral study of 4,7-phenanthroline-5,6-dione radical anion", *Rev. Roum. Chim.*, **1976**, *21*, 1445.
72. M. Hillebrand, V. E. Sahini and E. Volanschi, "Electronic structure of the chloro-benzenes in connection with their biological activity", *Bul. Inst. Politehnic București, Seria Chimie-Metalurgie*, **1977**, *39*, 27.
73. A. Gioabă, V. E. Sahini and E. Volanschi, "Electron spin resonance spectra and electronic structure of nitrophenoxatellurin anion-radicals", *J. Chem. Soc. (Perkin II)*. **1977**, 529.
74. V. E. Sahini and A. Savin, "On the stability of aromatic hydrocarbons. IV. On the linearity of the delocalization energy relationships", *Rev. Roum. Chim.*, **1977**, *22*, 171.
75. L. Ciohodaru, V. E. Sahini and E. Volanschi, "The electronic structure of some stilbene derivatives. IV. ESR spectra of some nitro-containing stilbene anion-radicals", *Rev. Roum. Chim.*, **1977**, *22*, 176.
76. V. E. Sahini and S. Badilescu, "Collision-induced light absorption in liquid mixtures", *Rev. Roum. Chim.*, **1977**, *22*, 811.
77. M. Ciureanu and V. E. Sahini, "A spectroscopic study of iodine complexes with some heterocycles in the azole series". *Rev. Roum. Chim.*, **1977**, *22*, 1441.
78. C. Bendic, M. Hillebrand and V. E. Sahini, "Computer program for SCF-CF calculations. I. Closed shell systems". *Rev. Roum. Chim.*, **1978**, *23*, 3.
79. V. E. Sahini, V. Constantin, I. Șerban and C. Vlădescu, "Electron-impact-induced fragmentation of dibenzo-[b,e]oxepin-11-one and dibenzo-[b,e]thiepin-11-one", *Rev. Roum. Chim.*, **1978**, *23*, 163.
80. V. E. Sahini, V. Constantin, I. Șerban and C. Vlădescu, "Electron-impact-induced fragmentation of some dibenzo-[b,e] thiepinines". *Rev. Roum. Chim.*, **1978**, *23*, 315.
81. V. E. Sahini, V. Constantin and I. Șerban, "Determination of ionization potential using a MI-1305 mass spectrometer". *Rev. Roum. Chim.*, **1978**, *23*, 479.
82. V. E. Sahini, R. Grigorovici and A. Butucelea, "A modified Urey-Bradley force field for hexahalodisilanes". *Rev. Roum. Chim.*, **1978**, *23*, 643.

83. A. Căilean, C. Mandravel și V. E. Sahini, "Studiul fizico-chimic al complexării de tip donator-acceptor în sistemul: Di-*p*-tolil-seleniura-Iod. I", *Rev. Chim., (București)* **1978**, *29*, 939.
84. V. E. Sahini and A. Savin, "On the stability of aromatic hydrocarbons. V. Use of localized molecular orbitals in delocalization energy relationships". *Rev. Roum. Chim.*, **1979**, *24*, 165.
85. A. Căilean, C. Mandravel and V. E. Sahini, "The evaluation of the two-center overlap integral for selenium-iodine bond of the donor-acceptor type", *Rev. Roum. Chim.*, **1979**, *24*, 391.
86. M. Ciureanu and V. E. Sahini, "A spectroscopic study of iodine complex, with aromatic amines", *Rev. Roum. Chim.*, **1979**, *24*, 655.
87. M. Contineanu, M. Ciureanu and V. E. Sahini, "Nuclear magnetic resonance study of self-association equilibria of aromatic amines in carbon tetrachloride", *Rev. Roum. Chim.*, **1979**, *24*, 663.
88. J. Weinberg and V. E. Sahini, "Xylidine isomers. VI. CNDO calculations on 2,4- and 2,6-xylidine", *Rev. Roum. Chim.*, **1980**, *25*, 9.
89. V. E. Sahini and A. Savin, "On a possible improvement of localized molecular orbitals", *Chem. Phys. Letters*, **1980**, *69*, 514.
90. A. Caragheorghlopol, H. Căldărăru, I. I. Bădilescu and V. E. Sahini, "An electron spin resonance study of the iminoxyl radicals of 1-Benzoxepin-5-one derivatives", *Rev. Roum. Chim.*, **1980**, *25*, 307.
91. M. Hillebrand and V. E. Sahini, "The electronic structure of phenoxaselenine". *Rev. Roum. Chim.*, **1980**, *25*, 307.
92. M. Hillebrand and V. E. Sahini, "Unrestricted Hartree-Fock spin densities of some heteroaromatic cation-radicals", *Rev. Roum. Chim.*, **1980**, *25*, 631.
93. V. E. Sahini, S. Moldoveanu and C. Mihailciuc, "On chlorobenzamide molecular structure", *Rev. Roum. Chim.*, **1980**, *25*, 1055.
94. V. E. Sahini, E. Volanschi and A. Meghea, "ESR spectra and electronic structure of some diphenylamine anion-radicals", *Rev. Roum. Chim.*, **1980**, *25*, 449.
95. C. Bendic, I. Ciurea și V. E. Sahini, "Structura electronică a unor aminodifenileteri", *Bul. Inst. Politehnic București, Seria Chimie-Metalurgie*, **1981**, *XLII*, 61.
96. J. Weinberg and V. E. Sahini, "Xylidine isomers. VII. Structure-hepatotoxic activity relationships of some xylidines", *J. Theor. Biol.*, **1981**, *88*, 153.
97. M. Ciureanu, V. E. Sahini, F. Cornea, C. Cercasov and M. Contineanu, "Dynamic NMR study of hindered rotation around the CN. bond in thyopiperidides", *Org. Magn. Reson*, **1981**, *15*, 148.
98. V. E. Sahini and A. Savin, "On the use of atom-localized molecular orbitals", *Z. Naturforsch.*, **1981**, *36a*, 415.
99. J. Weinberg and V. E. Sahini, "Xylidine isomers. V. Molecular complex spectra of iodine with xylidines", *Rev. Roum. Chim.*, **1981**, *26*, 521.
100. L. Ciurea, C. Bendic and V. E. Sahini, "II. Dipol moments of some Aminodiphenyl-ethers", *Bul. Inst. Politehnic București, Seria Chimie-Metalurgie*, **1981**, *XLIII*, 39.
101. V. E. Sahini, C. Bendic and L. Virag, "Reactivity of *m*-nitrophenyl acetate in excited state", *Rev. Roum. Chim.*, **1982**, *27*, 129.
102. C. Bendic, L. Ciurea and V. E. Sahini, "III. Electronic structure of some nitrodiphenyleters", *Bul. Inst. Politehnic București, Seria Chimie-Metalurgie*, **1982**, *XLIV*, 53.
103. C. Cercasov, F. Cornea, M. Ciureanu, M. Hillebrand, V. E. Sahini and E. Volanschi, "Electron spin resonance studies of several anion radicals of nitro-substituted thyoacylpiperidines and morpholines", *Org. Magn. Reson.*, **1982**, *20*, 221.
104. J. Weinberg, A. Dănescu and V. E. Sahini, "MO-LCAO Hückel calculations of some  $\beta$ -lactam antibiotics", *Studia biophysica*, **1983**, *93*, 161.

105. M. Ciureanu, F. Cornea, V. E. Sahini and C. Cercasov, "Studies on the electronic spectra of thyoacylpiperidides and morpholides", *Rev. Roum. Chim.*, **1983**, 28, 555.
106. V. E. Sahini and E. Volanschi, "Electronic structure and UV-spectral of some dibenzo-[b,e]-thiepine derivatives", *Rev. Roum. Chim.*, **1983**, 28, 785.
107. M. Ciureanu, V. E. Sahini, M. Contineanu, F. Cornea and C. Cercasov, "Internal rotation in charge transfer complexes", *Rev. Roum. Chim.*, **1983**, 28, 875.
108. C. Cercasov, F. Cornea, M. Ciureanu, M. Hillebrand, V. E. Sahini and E. Volanschi, "ESR and <sup>1</sup>H-NMR spectra of some nitrosubstituted thyobenzamides", *Rev. Roum. Chim.*, **1984**, 29, 25.
109. V. E. Sahini, "A method for partition coefficient calculation", in vol. "New trends in the study of water and ions in biological systems" (V. Vasilescu, C. F. Hazlewood, Eds., Biophysical Laboratory, Medical Faculty, Bucharest, 1984).
110. V. E. Sahini, "On the significance of the chemical bond concept", *Noesis*, **1984**, 10, 111.
111. M. Ciureanu, M. Hillebrand, V. E. Sahini and E. Volanschi, "UHF spin density calculations on substituted nitroaromatic anion radicals", *Rev. Roum. Chim.*, **1985**, 30, 97.
112. V. E. Sahini, "Molecular modifications of irradiated plant tissues after dehydration as revealed by ESR spectra", "Water and Ions in Biological Systems" (B. Pullman, V. Vasilescu, L. Packer Eds., U.S.M.S. Bucharest, 1985, p. 131).
113. M. F. Tripşa, V. E. Sahini and V. Vasilescu, "Anaesthetics and excitability", "Water and Ions in Biological Systems" (B. Pullman, V. Vasilescu, L. Packer Eds., U.S.M.S. Bucharest, 1985, p. 417).
114. M. Tripşa, V. E. Sahini, C. Nae and V. Vasilescu, "Structure-nerve membrane effect relationships of some local anaesthetics", *Gen. Physiol. Biophys.*, **1986**, 5, 371.
115. M. Hillebrand and V. E. Sahini, "Electronic spectra of some heteroaromatic cation-radicals", *Rev. Roum. Chim.*, **1986**, 31, 649.
116. M. Bugeanu, V. E. Sahini, V. T. Ciorba and A. T. Balaban, "Molecular complexes with aromatic cations as electron acceptors, VII", *Rev. Roum. Chim.*, **1986**, 31, 1013.
117. H. Căldăraru, A. Caragheorgheopol, M. Moraru and V. E. Sahini, "Electron spin resonance study of the  $\alpha$ -keto-iminoxy radicals of some bicyclic ketones", *J. Phys. Chem.*, **1975**, 79, 646.
118. H. Căldăraru, K. De Armond, K. Hauck and V. E. Sahini, "Electron spin resonance of electrochemically generated Rh (0)", *J. Am. Chem. Soc.*, **1976**, 98, 4455.
119. A. Caragheorgheopol, H. Căldăraru, T. Constantinescu and V. E. Sahini, "Nitroxides in the oxidation of bicyclic oximes and EPR study", *J. Am. Chem. Soc.*, **1971**, 93, 6766.
120. V. E. Sahini, C. Podină, "Partition coefficients on the basis of atomic charge density", *Rev. Roum. Chim.*, **1987**, 21, 843.
121. M. Bugeanu and V. E. Sahini, "Aniline complexes with iodine acceptor", *Rev. Roum. Chim.*, **1988**, 33, 75.
122. J. Weinberg, A. Donescu and V. E. Sahini, " $\beta$ -lactam antibiotics. II. Substituent effects on cephalosporins", *Rev. Roum. Chim.*, **1988**, 33, 795.
123. V. E. Sahini și C. Podină, "Calculul coeficienților de partiție pe baza densității de sarcină atomică. Compuși cu azot și oxigen", *Revista de Chimie*, **1988**, 33, 1032.
124. V. E. Sahini and C. Pop, "A molecular orbital approach to some radiogenetic mechanisms", *Rev. Roum. Chim.*, **1989**, 34, 253.
125. A. Donescu, J. Weinberg and V. E. Sahini, "Solute-solvent interactions in carbenicillin solubility process", *Rev. Roum. Chim.*, **1989**, 34, 453.
126. J. Weinberg, A. Donescu, V. E. Sahini and M. Cojocaru, " $\beta$ -lactam antibiotics. III. Electronic structure and physico-chemical properties of some antibiotic molecules and their intermediates", *Rev. Roum. Chim.*, **1991**, 36, 417-420.

127. V. E. Sahini, M. Andrei și L. Bîrlă, "Stabilitatea unor radicali rezultați la iradierea  $\gamma$  a ligninei", *Rev. Chim. (București)*, **1993**, *44*, 20-22.
128. V. E. Sahini și E. J. Tomuș, "Studiul termochimic al reacției dintre benzensulfonamida sodică și hipocloritul de sodiu cu obținerea benzensulfonamidei sodice N-clorurate (cloramina B)", *Rev. Chim. (București)*, **1993**, *44*, 50-52.
129. J. Weinberg, A. Donescu, V. E. Sahini, M. Cojocaru and C. Bercu, " $\beta$ -lactam antibiotics. VI. Cephalotin stability dependence on thermal and radiative treatment", *Rev. Roum. Chim.*, **1993**, *38*, 803-806.
130. V. E. Sahini and C. Postolache, "Kinetic aspects of glucose  $\gamma$ -irradiated enzymatic oxidation". *Rev Roum. Chim.*, **1994**, *39*, 1117-1122.
131. V. E. Sahini, E. Constantinescu, S. Cilianu, M. Hillebrand, E. Volanschi, C. Bendic, G. Sala and M. Andrei, "Spectral and voltammetric study and electronic structure of some physiologically active compounds. I", *Rev. Roum. Chim.*, **1994**, *39*, 991-1000.
132. M. Hillebrand and V. E. Sahini, "Molecular orbital modelization of some processes involved in  $\gamma$ -irradiated nucleotides", *Rev. Roum. Chim.*, **1995**, *40*, 595-599.
133. V. E. Sahini, M. Dumitrescu, E. Volanschi, L. Bîrlă and C. Diaconu, "Spectral and interferometrical study of the interaction of haemin with glutathione", *Biophys. Chem.*, **1996**, *59*, 245-253.
134. V. E. Sahini, M. T. Căproiu and G. Ioniță, "Lipophilicity Study of some antipyrine derivatives and their interaction with aminoacids", *Rev. Roum. Chim*, **1999**, *44*, 817-822.
135. V. E. Sahini, L. Bîrlă, A. Tîrșoagă and L. Preda, "Ionic interaction of potassium chloride in aqueous solutions from interferometric data", *Rev. Roum. Chim*, **2000**, *45*, 625-630.
136. G. Ioniță, V. E. Sahini, Gh. Semenescu and P. Ioniță, " Kinetics oxidation of aminoacids by some free stable hydrazyl radicals" *Acta Chim. Slov.*, **2000**, *47*, 111-119.
137. V. Em. Sahini, Liliana Bîrlă, "Some Physical Chemical Aspects of Albumin-Alkali Halide Interaction", Kluwer Academic Publishers, *NATO Science Series*, **1999**, *25*, 467- 477.
138. J. Weinberg, A. Donescu, V. E. Sahini, F. Hartescu and D. Lerner, "*Ab-initio* studies concerning adenosin-5'-triphosphate. II. The phosphonyl transfer reaction" *Proceedings of EUROSIM 2001*. TUDelft (A.W.Heemink *et al.*, Eds.), ISBN: 90-806 441-1-0.
139. V. E. Sahini, L. Bîrlă, G. Csire, A. Tîrșoagă and D. Dogaru, "The effect of inorganic salts on albumin absorption spectra and refractive indices", *Rev. Roum. Chim*. **2001**, *46*, 39-44.
140. V. E. Sahini, G. Csire, C. Popa-Țilimpea, A. Tîrșoagă, "Kinetic Study of the pH Influence on BSA Thermal Denaturation" *Anal. Univ. Bucuresti - Ser. Chimie*, **2002**, *vol. I*, 127-132.
141. L. Bîrlă, A. Tîrșoagă, V. E. Sahini, "Spectroscopic study of some human and bovine serum albumine conformers obtained by denaturation" *Anal. Univ. Bucuresti - Ser. Chimie*, **2003**, *12*, 161-166.
142. V. Chiosa, C. Pantazică, V. E. Sahini, "Optical rotatory dispersion of some bovine serum albumine conformers", *Rev. Roum. Chim.*, **2005**, *50*, 503-506.
143. C. Pantazică, V. E. Sahini, "A note concerning the thermal unfolding-refolding of proteins", *Anal. Univ. Bucuresti-Ser. Chimie*, **2005**, *14*, 331-335.
144. G. Ioniță, C. Postolache, C. Țilimpea, D. Dinu, V. E. Sahini, "Planar chromatographic and electroforetic study of thermally induced conformational modifications of protein structure", *J. Planar Chromatography*, **2003**, *16*, 308-310.
145. G. Ioniță, V. E. Sahini, "Oxidation of natural and thermal denaturated bovine serum albumin hydrazyl free radicals in the presence of cyclodextrines", *J. Inclusion Phenom. And Macrocycl. Chem.*, **2004**, *50*, 183-184.

- 
146. C. Pantazică, G. Ioniță, V. E. Sahini, "The concentration influence on the reactivity of natural and denaturated bovine serum albumin and in the presence of cyclodextrins", *Rev. Roum. Chim.*, **2004**, *49*, 1001-1004.
  147. V. Chiosa, V. E. Sahini, "Optical rotatory dispersion of some human serum albumin conformers", *Rev. Roum. Chim.*, **2007**, *52*, 89-91.
  148. V. E. Sahini, G. Ioniță, "Structural modification of conformers resulting from different albumin refolding dynamics" (18 pag), *Advances in Quantum Chem. Bonding Struct*, Ed. Research Signpost Publishing House, 2007.