



## PROFESSOR VICTOR-EMANUEL SAHINI (1927–2017)

It is with deep regret that the Roumanian community of chemists announces the passing of Acad. Victor Emanuel Sahini, one of the most prominent professors and scientists from our country, on the 18<sup>th</sup> of July, 2017.

Professor Sahini was born in the city of Galați, where he spent his childhood and first formative years. Moving with his family to Bucharest, he graduated from the “Gheorghe Lazăr” high school and enrolled as a student at the Faculty of Chemistry of the University of Bucharest. He graduated in 1950 as a brilliant student, and became an assistant in the Department of Physical Chemistry of the Faculty of Chemistry, University of Bucharest.

This was the beginning of nearly 60 years of continuous teaching activity in the same Department, occupying successively the positions of lecturer (1955), assistant professor (1962) and full professor (1968). He prepared and defended, in 1962, the PhD thesis entitled “Contributions to the Theory of the Coordinative Bond” under the supervision of Professor I. G. Murgulescu, member of the Roumanian Academy and the founder of the Department of Physical Chemistry at the University of Bucharest.

The teaching and scientific activities of Professor Sahini were focused on modern topics in Physical Chemistry related to molecular structure, spectroscopy and theoretical chemistry. As professor at the Faculty of Chemistry, University of Bucharest, he gave for the first time lectures on Physico-Chemical Analysis (1952), Quantum Chemistry (1954), Atomic and Molecular Structure (1960–1990) and Molecular Spectroscopy. Aside from his main teaching activity at the Faculty of Chemistry, Professor Sahini gave lectures on Molecular Structure and Spectroscopy, Electrochemistry and Colloid Chemistry, and special chapters of Physical Chemistry to the students of the Faculties of Biology-Biochemistry and Geology of the University of Bucharest, as well as to the students of the Military Technical Academy. In the period 1974–1990, when the Faculty of Chemistry was included in the Polytechnic Institute of Bucharest, Professor Sahini gave, for several years, lectures of General Chemistry to the first year students of the Faculties of Electronics and Automatics. The large variety of teaching fields, the high quality of his lectures, based on a solid scientific background, his calm presence and understanding nature towards students and young assistants, were deeply appreciated by more than 50 series of students, now teachers and researchers in different fields of Chemistry, in Romania and abroad. More than 30 students defended their PhD thesis under the attentive supervision of Professor Sahini.

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, and by the rigorousness of the experimental methods employed and theoretical interpretation of the results. This fruitful scientific activity is illustrated by three multi-volume books and by more than 150 papers published in prestigious international journals, highly cited in the literature.

As a recognition of his scientific work, Professor Sahini was elected in 1963 as Corresponding Member of the Roumanian Academy, becoming Full Member in 1990. He was president of the Quantum Chemistry and Molecular Spectroscopy Commission of the Academy, Director of the Romanian Academy Library (1980–1994) and Vice-Chief-Editor of *Revue Roumaine de Chimie*, the most important scientific journal in Chemistry in Romania, since its foundation in 1964 until 1990.

In his scientific activity, he developed both the experimental and theoretical levels of research, being interested in explaining, on theoretical grounds, the experimental data on molecular structure, spectral properties, chemical reactivity and molecular interactions. Notably, Professor Sahini has initiated in Roumania the application of Quantum Chemistry methods to various topics 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 molecular orbital theoretical calculations. Considering the molecular systems, he mainly focused on the charge transfer complexes and radicals having well-known or potential biological activity.

As concerns the radical species, three main classes can be distinguished: charged radical ions (anions and cations) of different organic compounds, stable nitroxide free radicals and gaseous-phase radicals obtained by fragmentation processes of different organic molecules. All these species were investigated by combined spectral (ESR, UV-Vis, IR, mass spectrometry) and electrochemical techniques, 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 heteroaromatic molecules with different acceptors were studied by spectrophotometry, and the experimental properties were interpreted in the frame of a perturbation treatment.

In the last decades, together with Professor Tatiana Oncescu, Professor Sahini initiated, in the Department of Physical Chemistry, a new research direction designated as Biophysical Chemistry. In this field, he was interested in the electronic structure and physico-chemical properties of several drugs and pollutants in correlation with their biological or toxic activity, in some processes involved in  $\gamma$ -irradiated nucleotides and lignin, and in the study of protein (albumins)–drug interaction. An interferometric method for the study of ionic interactions in diluted aqueous solutions was also developed.

A significant part of his scientific activity was devoted to some applicable aspects of Physical Chemistry. As a member of a chemical-pharmaceutical research team, Professor Sahini participated to the preparation of a new patented drug, *Romener*, and initiated a method of photochemical synthesis of D<sub>2</sub>-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.

Professor Sahini divided his scientific research activity between the Department of Physical Chemistry at the University of Bucharest and the Centre of Physical Chemistry of the Romanian Academy, later on the “Ilie Murgulescu” Institute of Physical Chemistry, 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 Romanian Academy.

As a mentor to generations of chemists, Professor Sahini impressed by his ability to create a comfortable, stimulating environment in his laboratory. He succeeded in ensuring a durable and fruitful collaboration between the research teams at the Department of Physical Chemistry and the “Ilie Murgulescu” Institute of Physical Chemistry, between professors, researchers, students and PhD students.

Professor Sahini participated intensively at the scientific and academic life in Roumania, being Vice-Rector of the University of Bucharest (1970–1972), member of the United Nations University Council (1974–1977) and president of the Organising Committee of the ROMPHYSICHEM International Conference of Physical Chemistry. In 2000, Professor Sahini was awarded by the president of Roumania with the National Order “Star of Roumania” in the rank of Officer, one of the highest civil distinctions in Roumania.

At this moment of separation and beyond, all of us will remember Professor Sahini as we give recognition to his great character and dedication in the tireless pursuit of scientific knowledge.

*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 and 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'aldehyde 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. Pircălăbescu, "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. Caragheorghopol 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 a-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. Soedinenya*, 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 nitrophenoxatellurine 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. Şerban 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. Şerban and C. Vlădescu, "Electron-impact-induced fragmentation of some dibenzo-[b,e] thiepines". *Rev. Roum. Chim.*, **1978**, *23*, 315.
81. V. E. Sahini, V. Constantin and I. Şerban, "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 donor-acceptor în sistemul: Di-*p*-tolilseleniura-Iod. I", *Rev. Chim., (Bucureşti)* **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. Caragheorghopol, H. Căldăraru, I. I. Bădilescu and V. E. Sahini, "An electron spin resonance study of the iminoxy 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 Bucureşti, 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 Bucureşti, 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 Bucureşti, 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  $^1\text{H-NMR}$  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, "UMF 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. Tripșa, 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. Tripșa, 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. Em. Sahini, G. Ionita, „Interaction study of some aminoacids with three derivatives of 2-mercaptobenzothiazole“, *Revue Roumaine de Chimie*, **1997**, *42 (7)*, 531-534.
135. 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.
136. 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.
137. 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.
138. V. Em. Sahini, L. Bîrlă, "Some Physical Chemical Aspects of Albumin-Alkali Halide Interaction", Kluwer Academic Publishers, *NATO Science Series*, **1999**, *25*, 467- 477.
139. 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.
140. 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.
141. G. Ioniță, P. Ionita, V.Em. Sahini, C. Luca, "Influence of Cyclodextrins on the Kinetics of Oxidation of Amino Acids and BSA by Hydrazyl Radicals", *Journal of Inclusion Phenomena and Macrocyclic Chemistry*, **2001**, *39*, 269-271.
142. 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. 1*, 127-132.
143. 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.
144. V. Chiosa, C. Pantazică, V. E. Sahini, "Optical rotatory dispersion of some bovine serum albumine conformers", *Rev. Roum. Chim.*, **2005**, *50*, 503-506.
145. C. Pantazică, V. E. Sahini, "A note concerning the thermal unfolding-refolding of proteins", *Anal. Univ. Bucuresti-Ser. Chimie*, **2005**, *14*, 331-335.
146. 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.
147. 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.
148. 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.
149. V. Chiosa, V. E. Sahini, "Optical rotatory dispersion of some human serum albumin conformers", *Rev. Roum. Chim.*, **2007**, *52*, 89-91.
150. 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.
151. V. E. Sahini, G. Ionita, "Evidence of changes in hydrophilic/ hydrophobic balance and in chemical activity of HSA induced by thermal treatments", *Central European Journal of Chemistry*, **2011**, *9*, 245-252.
152. A. Rogozea, I. Matei, I. M. Turcu, G. Ionita, V. Em. Sahini and A. Salifoglou, EPR and circular dichroism solution studies on the interactions of bovine serum albumin with ionic surfactants and  $\beta$ -cyclodextrin, *J. Phys. Chem. B*, **2012**, *116*, 14245-14253.