Prof. Dr. Anca SILVESTRU

LIST OF PUBLICATIONS 2016-2025

Papers in professional journals

96. Toma, A. M.; Nicoara, A.; Silvestru, A.; Rüffer, T.; Lang, H.; Mehring, M. Bis(2-phenoxyphenyl)dichalcogenides and their chemical reactivity.

97. Toma, A. M.; Raț, C. I.; Pavel, O. D.; Hardacre, C.; Rüffer, T.; Lang, H.; Mehring, M.; Silvestru, A.; Pârvulescu, V. I. Heterocyclic bismuth(III) compounds with transannular N→Bi interactions as catalysts for the oxidation of thiophenol to diphenyldisulfide. *Catal. Sci. Technol.* **2017**, 7, 5343–5353. https://doi.org/10.1039/C7CY00521K.

98. Bellini, C.; Carpentier, J.-F.; Dorcet, V.; Silvestru, A.; Sarazin, Y. Heteroleptic lead(II)-halide complexes supported by a bulky iminoanilide ligand. *Main Group Met. Chem.* **2017**, 40(3–4), 73–80. https://doi.org/10.1515/mgmc-2017-0033.

99. Pop, A.; Popa, R. A.; Silvestru, C.; Silvestru, A. Hypercoordinated organoselenium compounds with O→Se intramolecular interactions. *Studia Univ. Babeș-Bolyai, Seria Chemia* **2017**, LXII, 4(1), 193–199.

100. Popa, R. A.; Licarete, E.; Banciu, M.; Silvestru, A. Organoselenium compounds containing pyrazole or phenylthiazole groups: Synthesis, structure, tin(IV) complexes and antiproliferative activity. *Appl. Organomet. Chem.* **2018**, e4252. https://doi.org/10.1002/aoc.4252.

101. Șuteu, R.; Shova, S.; Silvestru, A. Triarylphosphanes with 2-(Et2NCH2)C6H4 groups. Copper(I) complexes and oxidation derivatives of type EP(C6H4CH2NEt2-2)nPh3−n (E = S, Se; n = 1, 2). *Inorg. Chim. Acta* **2018**, 475, 105–111.

102. Cristea, A.; Mărgineanu, D.; Silvestru, A.; Silvestru, C. Synthesis, spectroscopic characterization and solid state structure of [(E)-2-{(2′,6′-iPr2C6H3)N=CH}C6H4]PbPh2Br – a hypervalent (10-Pb-5) species. *Rev. Roum. Chim.* **2018**, 63, 481–487.

103. Chiorean, N.; Coza, C.; Pop, A.; Silvestru, A. New hypercoordinated diorganotin(IV) compounds with dithiocarbamato ligands. Synthesis and structural characterization. *J. Organomet. Chem.* **2019**, 880, 83–90. https://doi.org/10.1016/j.jorganchem.2018.10.030.

104. Pop, A.; Silvestru, A. Organoselenium compounds with N,C,N pincer groups. Synthesis, structure and reactivity. *Polyhedron* **2019**, 160, 279–285. https://doi.org/10.1016/j.poly.2018.12.041.

105. Beleaga, A.; Denes, E.; Silvestru, C.; Silvestru, A. Experimental evidence for hypercoordination in triorganotelluronium halides with 2-(Me2NCH2)C6H4 groups. *New J. Chem.* **2019**, 43, 11585–11595. https://doi.org/10.1039/C9NJ02530H.

106. Chiorean, N.; Pop, A.; Silvestru, C.; Silvestru, A. Esters of diphenylphosphinoselenothioic and diphenylphosphinodiselenoic acids with potential for RAFT polymerization. *Studia Univ. Babeș-Bolyai, Seria Chemia* **2019**, 64(2, Part 1), 197–206.

107. Șuteu, R.; Raț, C. I.; Silvestru, C.; Simion, A.; Candu, N.; Pârvulescu, V. I.; Silvestru, A. Hypercoordinated diorganoantimony(III) compounds of types [2-(Me2NCH2)C6H4]2SbL and [PhCH2N(CH2C6H4)2]SbL (L = Cl, ONO2, OSO2CF3). Synthesis, structure and catalytic

behaviour in the Henry reaction. *Appl. Organomet. Chem.* **2020**, 34(4), e5393. https://doi.org/10.1002/aoc.5393.

108. Dobri, A.; Covaci, Al.; Covaci, A.; Silvestru, A. Group 12 metal complexes with P,N chelating triarylphosphanes. Solution behaviour and solid state structure. *Polyhedron* **2020**, 182, 114511. https://doi.org/10.1016/j.poly.2020.114511.

109. Șuteu, R.; Toma, A. M.; Mehring, M.; Silvestru, A. Hypercoordinated diorganopnicogen(III) compounds based on a butterfly-like skeleton of type [CH3OCH2CH2N(CH2C6H4)2]M (M = Sb, Bi). *J. Organomet. Chem.* **2020**, 920, 121343. https://doi.org/10.1016/j.jorganchem.2020.121343.

110. Denes, E.; Beleagă, A.; Silvestru, A. Hypercoordinated triorganotellurium(IV) derivatives of chalcogen-centred organophosphorus ligands. *Inorg. Chim. Acta* **2020**, 511, 119841. https://doi.org/10.1016/j.ica.2020.119841.

111. Denes, E.; Lindorfer, C.; Dragomir, L.; Rațț, C. I.; Silvestru, A. New hypercoordinated organoantimony(V) bromides. Synthesis and structural characterization. *Rev. Roum. Chim.* **2020**, 65(6), 587–593. https://doi.org/10.33224/rrch.2020.65.6.09.

112. Popa, R. A.; Lippolis, V.; Silvestru, A. Cu(II) and Ag(I) complexes of the pyrazole-derived diorganoselenide (pzCH2CH2)2Se. Synthesis, solid state structure and solution behavior. *Inorg. Chim. Acta* **2021**, 520, 120272. https://doi.org/10.1016/j.ica.2021.120272.

113. Denes, E.; Vlassa, M.; Silvestru, C.; Silvestru, A. New hypercoordinated triaryltelluronium derivatives of organophosphorus ligands. Synthesis and structural characterization. *Rev. Roum. Chim.* **2021**, 66(1), 33–40. https://doi.org/10.33224/rrch.2021.66.1.03.

114. Kiss, L.; Shova, S.; Vlassa, M.; Silvestru, A.; Rațț, C. I.; Silvestru, C. {2,6-bis[(dimethylamino)methyl]phenyl}mercury(II) acetate, [2,6-(Me2NCH2)2C6H3]Hg(OAc) – a useful intermediate for selective palladation of 1,3-(Me2NCH2)2C6H4. *Rev. Roum. Chim.* **2021**, 66(2), 167–177. https://doi.org/10.33224/rrch.2021.66.2.07.

115. Șalgău, C.; Silvestru, C.; Silvestru, A. Structural aspects in diorganotin(IV) complexes. Ph2Sn(S2CNMe2)(NCS) case study. *Rev. Roum. Chim.* **2021**, 66(3), 231–237. https://doi.org/10.33224/rrch.2021.66.3.02.

116. David, M.; Mitea, R.; Silvestru, A. Silver(I) complexes based on diorganoselenium(II) ligands with amino or hydroxo functionalities. *J. Mol. Struct.* **2021**, 1246, 131243. https://doi.org/10.1016/j.molstruc.2021.131243.

117. Șalgău, C.; Dobri, A.; Silvestru, A. New mercury(II) complexes of polydentate ligands. *Studia Univ. Babeș-Bolyai, Chemia* **2021**, LXVI(3), 175–185. https://doi.org/10.24193/subbchem.2021.3.10.

118. Covaci, Ancuța; Silvestru, Cristian; Silvestru, Anca. Coordination behavior of PPh2{C6H4[CH2N(CH2CH2)2O]-2}. Case study CdCl2[PPh2{C6H4[CH2N(CH2CH2)2O]-2}]. *Main Group Met. Chem.* **2021**, 44, 261–266. https://doi.org/10.1515/mgmc-2021-0029.

119. Hodorogea, A. M.; Silvestru, A.; Lippolis, V.; Pop, A. Group 12 metal complexes of mixed thia/aza and thia/oxa/aza macrocyclic ligands. *Polyhedron* **2022**, 216, 115650. https://doi.org/10.1016/j.poly.2022.115650.

120. Denes, E.; Marongiu, L.; Arca, M.; Lippolis, V.; Silvestru, A. New ionic [{2-(Me2NCH2)C6H4}(R)Sn{(EPPh2)2N}][(EPPh2)2N] (R = 2-(Me2NCH2)C6H4, nBu; E = O, S, Se) compounds. Solution behavior and solid state structure. *J. Organomet. Chem.* **2022**, 963, 122282. https://doi.org/10.1016/j.jorganchem.2022.122282.

121. Dumitraș, D.; Pop, A.; Silvestru, A. Silver(I) and gold(I) complexes of multidentate ligands based on functionalized pyridine. *Polyhedron* **2022**, 220, 115801. https://doi.org/10.1016/j.poly.2022.115801.

122. Popa, R. A.; Nicoară, A.; Arca, M.; Lippolis, V.; Pintus, A.; Silvestru, A. Homoleptic and heteroleptic diorganoselenides containing pyrazole functionalities. Synthesis, characterization, and antioxidant activity. *Appl. Organomet. Chem.* **2022**, e6894. https://doi.org/10.1002/aoc.6894.

123. Popa, R. A.; David, M.; Licarete, E.; Banciu, M.; Silvestru, A. On the coordination behaviour of diorganoselenium ligands based on amino and azole functionalities: silver(I) complexes with relevance for biological applications. *New J. Chem.* **2022**, 46, 23019–23029.

124. Corjuc, L.; Silvestru, C.; Silvestru, A. New organobismuth(III) compounds based on a tetrahydro dibenzo[c,f][1,5]azabismocine heterocyclic framework. *Rev. Roum. Chim.* **2023**, 68(5–6), 209–215. https://doi.org/10.33224/rrch.2023.68.5-6.02.

125. Ben Kiran, A.; Silvestru, A.; Rat, C. I.; Silvestru, C. [Ag(EtOH){Ph3Bi[O(O)CC5H4N-3]2}(ClO4)]·CHCl3 – a coordination polymer based on a divergent, ditopic metalloligand. *Rev. Roum. Chim.* **2023**, 68(3–4), 127–137. https://doi.org/10.33224/rrch.2023.68.3-4.02.

126. Corjuc, L.; Pop, A.; Licarete, E.; Banciu, M.; Silvestru, A. Silver(I) complexes with diorganochalcogen ligands of type (2-MeC6H4CH2)2E (E = S, Se). Synthesis, structure and antiproliferative activity. *Inorg. Chim. Acta* **2024**, 565, 121972. https://doi.org/10.1016/j.ica.2024.121972.

127. Șuteu, R.; Silvestru, C.; Silvestru, A. Hypercoordination in triorganoantimony(III) compounds. Case study of heteroleptic [2,6-(Me2NCH2)2C6H3]2(Ph)Sb. *Rev. Roum. Chim.* **2024**, 69(5–6), 241–245. https://doi.org/10.33224/rrch.2024.69.5-6.01.

128. Dumitraș, D.; Dalmau, D.; García-Orduña, P.; Pop, A.; Silvestru, A.; Urriolabeitia, E. P. Orthopalladated imidazolones and thiazolones: synthesis, photophysical properties and photochemical reactivity. *Dalton Trans.* **2024**, 53(21), 8948–8957. https://doi.org/10.1039/D4DT00730A.

129. Cretu, C.; Andelescu, A. A.; Silvestru, A.; Chiș, V.; Candreva, A.; La Deda, M.; Szerb, E. I. Symmetry, aggregation and counterion role in tuning NIR absorbance of a Cu(I) coordination complex. *Inorg. Chim. Acta* **2024**, 572, 122302. https://doi.org/10.1016/j.ica.2024.122302.

130. Tamas, M.; Pop, A.; Silvestru, A. Homoleptic triorganotin(IV) organoselenolates of type R3Sn(SeCH2CH2pz). *Rev. Roum. Chim.* **2025**, 70(5–6), 305–311.

131. Tamas, M.; Butuza, R. A.; Dan, M.; Silvestru, A. Diorganotin(IV) Complexes of Organoselenolato Ligands with Pyrazole Moieties—Synthesis, Structure and Properties. *Molecules* **2025**, 30, 1648.

132. Butuza, R. A.; Pop, A.; Silvestru, A. Copper(II) complexes of diorganoselenium ligands containing a pyrazole functionality. *Rev. Roum. Chim.* **2025**, 70(7–8), 435–441.

Book chapters

1. Pop, A.; Silvestru, C.; Silvestru, A. Organoselenium and Organotellurium Compounds Containing Chalcogen–Oxygen Bonds in Organic Synthesis or Related Processes. In *Selenium and Tellurium Reagents in Chemistry and Materials Science*; Laitinen, R.; Oilunkaniemi, R., Eds.; Walter de Gruyter: Berlin/Boston, **2019**; pp 61–121. https://doi.org/10.1515/psr-2018-0061. ISBN 978-3-11-052794-0.

2. Silvestru, A.; Pop, A. Six-Membered Rings With Two or More Heteroatoms With At Least One Selenium or Tellurium. In *Comprehensive Heterocyclic Chemistry IV*; Black, D. StC.; Cossy, J.;

Stevens, C. V., Eds.; Elsevier, **2022**; pp 687–734. https://doi.org/10.1016/B978-0-12-818655-8.00132-3.

3. Pop, A.; Silvestru, A.; Silvestru, C. Chalcogenones and Pincer Ligands: Coordination Chemistry and Interaction with Transition and Heavy Main Group Elements. In *Chalcogen Chemistry: Fundamentals and Applications*; Lippolis, V.; Santi, C.; Lenardão, E. J.; Braga, A. L., Eds.; RSC: Croydon, UK, **2023**; pp 83–109.

Cluj-Napoca, 23.01.2026