

Saïd El Kazzouli

Full Professor at the Euromed University of Fes, Morocco.

E-Mail : s.elkazzouli@gmail.com ou s.elkazzouli@ueuromed.org

Tél : (212) 6 61 29 95 65

Biography

Saïd El Kazzouli was born in Beni Mellal (Morocco) in 1975. He received his Master's degree in 2000 from the Universities of Orleans, Paris V and Paris XI. Then, he received his Ph.D. in chemistry from the University of Orleans in 2004 under the supervision of Prof. G. Guillaumet and Prof. A. Mouaddib. He worked then at the same University as a postdoctoral fellow with Prof. L. Agrofoglio and Prof. S. Berteina-Raboin from 2004 to 2006. In 2006, he joined the National Cancer Institute (NCI) at the National Institutes of Health (NIH) in USA for a postdoctoral intramural research training award for 3 years with Dr V. E. Marquez. In 2009, he became a researcher (project leader) at INANOTECH, MAScIR Foundation in Rabat (Morocco). In 2013, he joined the Euro-Mediterranean University of Fes (Morocco) as Associate Professor and in 2019 he was appointed as Full Professor at the same University. He is the director of the laboratory of medicinal chemistry at the Euromed University. His main research interests are the drug design and discovery (anti-cancers, anti-SARS CoV-19, anti-malaria), synthesis and drug delivery by nanoparticles, heterocyclic chemistry, catalysis and green chemistry. El Kazzouli has a *h*-index = 26, a *i10* index = 44 (Scopus and Google scholar), more than 2130 citations, 71 publications, two book chapters and four patents.

Publications

1. Regioselective C-H Functionalization of the Six-Membered Ring of the 6,5-Fused Heterocyclic Systems: An Overview. Soukaina Faarasse, Nabil El Brahmi, Gérald Guillaumet, **Saïd El Kazzouli**, *Molecules*, **2021**, 26, 5763. (IF = 4.4).
2. Synthesis and Functionalization of Imidazo[1,2-b]Pyridazine by Means of Metal-Catalyzed Cross-Coupling Reactions. Ahmed El Akkaoui, Jamal Koubachi, Gérald Guillaumet, **Saïd El Kazzouli**. *ChemistrySelect*, **2021**, 8985–9011. (IF = 2.1).
3. Palladium-Catalyzed Regioselective C-H Arylation of 4-Azaindazole at C3, C5 and C7 Positions. Soukaina Faarasse, **Saïd El Kazzouli**, Otmane Bourzikat, Stéphane Bourg, Samia Aci-Sèche, Pascal Bonnet, Franck Suzenet, Gérald Guillaumet, *Advanced Synthesis & Catalysis*, **2021**, 16, 3937-3945. (IF = 5.83).
4. Synthesis and evaluation of a novel class of ethacrynic acid derivatives containing triazoles as potent anticancer agents. Abdelmoula El Abbouchi, Nabil El Brahmi, Marie-Aude Hiebel, Jérôme Bignon, Gérald Guillaumet, Franck Suzenet, **Saïd El Kazzouli**. *Bioorganic Chemistry*, **2021**, 115, 105293. (IF = 5.27)
5. Assessment of pesticide residues, exogenous heavy metals and essential minerals in spinach after cleaning with traditional methodologies, Moussaïf, A., El Yahyaoui, A. Saghdani, N. **El Kazzouli**, S. Iddar, A. El Mzibri, M. *International Journal of Environmental Analytical Chemistry*, **2021**, DOI10.1080/03067319.2021.1931857. (IF = 2.82)
6. Copper complexes of phosphorus dendrimers and their catalytic properties, Omar Alami, Régis Laurent, Jean-Pierre Majoral, Nabil El Brahmi, **Saïd El Kazzouli**, Anne-Marie Caminade. *Inorganica Chimica Acta*, **2021**, 517, 120212. (IF = 2.54)
7. A regioselective C7 bromination and C7 palladium-catalyzed Suzuki–Miyaura cross-coupling arylation of 4-substituted NH-free indazoles. *RSC Advances*, **2021**, 11, 7107-7114 (IF = 3.3)
8. Palladium-Catalyzed Oxidative Arylation of 1H-Indazoles with Arenes, Gambouz, K.; El Abbouchi, A.; Nassiri, S.; Suzenet, F.; Bousmina, M.; Akssira, M.; Guillaumet, G.; **El Kazzouli, S.** *European Journal of Organic Chemistry*, **2020**, 48, 7435-7439. (IF = 2.89).
9. Synthesis and biological evaluation of ethacrynic acid derivatives bearing sulfonamides as potent anti-cancer agents, El Abbouchi, A.; El Brahmi, N.; Hiebel, M-A.; Bignon, J.; Guillaumet, G.; Suzenet, F.; **El Kazzouli, S.** *Bioorg. Med. Chem. Lett.* **2020**, 30, 127426. (IF = 2.7).
10. "On Water" Palladium Catalyzed Direct Arylation of 1H-Indazole and 1H-7-Azaindazole. Gambouz, K.; El Abbouchi, A.; Nassiri, S.; Suzenet, F.; Bousmina, M.; Akssira, M.; Guillaumet, G.; **El Kazzouli, S.** *Molecules*. **2020**, 25, 2820. (IF = 3.27).

11. Direct arylation and Suzuki-Miyaura coupling of imidazo[1,2-a]pyridines catalyzed by (SIPr)Pd(allyl)Cl complex under microwave-irradiation. El Abbouchi, A.; Koubachi, J.; El Brahmī, N.; **El Kazzouli, S.** *Med J. Chem.* **2019**, 9, 347-354 (IF = 1.45).
12. Unusual rearrangement of imidazo[1,5-a]imidazoles and imidazo[1,2-b]pyrazoles into imidazo[1,5-a]pyrimidines and pyrazolo[1,5-a]pyrimidines, Gambouz, K.; Loubidi, M.; Tber, Z.; Driowy, M.; Allouchi, H.; **El Kazzouli, S.** Akssira, M.; Guillaumet, G. *RSC Advances*, **2019**, 9 (50), 29051-29055. (IF = 3.05).
13. Oxidative alkenylation of fused bicyclic heterocycles. Koubachi, J.; El Brahmī, N.; Guillaumet, G.; **El Kazzouli, S.** *European Journal of Organic Chemistry*, **2019**, 2568. (IF = 3.03).
14. Exploration of biomedical dendrimer space based on in-vitro physicochemical parameters: key factor analysis (Part 1). Mignani, S.; Rodrigues, J.; Roy, R.; Shi, X.; Cenā, V.; **El Kazzouli, S.**; Majoral, J-P. *Drug Discov. Today*, **2019**, 24, 1176. (IF = 6.88).
15. Exploration of biomedical dendrimer space based on in-vitro physicochemical parameters: key factor analysis (Part 2). Mignani, S.; Rodrigues, J.; Roy, R.; Shi, X.; Cenā, V.; **El Kazzouli, S.**; Majoral, J-P. *Drug Discov. Today*, **2019**, 24, 1184. (IF = 6.88).
16. Palladium-catalyzed C3 arylations of 1H and 2H pyrazolo[4,3-b]pyridines on water: One. Faarasse, S.; **El Kazzouli, S.**; Suzenet, F.; Guillaumet, G., *J. Org. Chem.* **2018**, 83, 12847-12854 (IF = 4.75).
17. Synthesis and characterization of new organophilic clay. Preparation of polystyrene/clay nanocomposite, Ben-Yahia, A.; **El Kazzouli, S.**; Essassi, E.M.; Bousmina, M.M. *Scientific Study and Research: Chemistry and Chemical Engineering, Biotechnology, Food Industry*, **2018**, 19, 193.
18. On Water” Direct C-3 Arylation of 2H-Pyrazolo[3,4-b]pyridines, Faarasse, S. El Kazzouli, S.; Naas, M.; Jouha, J.; Suzenet, F.; Guillaumet, G., *J. Org. Chem.* **2017**, 82, 12300. (IF = 4.85)
19. Original Multivalent Gold(III) and Dual Gold(III)–Copper(II) Conjugated Phosphorus Dendrimers as Potent Antitumoral and Antimicrobial Agents, Mignani, S.; El Brahmī, N.; El Kazzouli, S.; Laurent, R.; Ladeira, S.; Caminade, A-M.; Pedziwiatr-Werbicka, E.; Szewczyk, E. M.; Bryszewska, M.; Bousmina, M.; Cresteil, T.; Majoral, J-P. *Molecular Pharmaceutics*. **2017**, 14, 4087. (IF = 4.44)
20. Anticancer copper(II) phosphorus dendrimers are potent proapoptotic Bax activators. Mignani, S. El Brahmī, N.; Eloy, L.; Poupon, J.; Nicolas, V.; Steinmetz, A.; **El Kazzouli, S.**; Bousmina, M.; Blanchard-Desce, M.; Caminade, A-M.; Majoral, J-P.; Cresteil, T. *Eur. J. Med. Chem.* **2017**, 132, 142. (IF = 4.5)
21. Symmetrical and unsymmetrical incorporation of active biological monomers on the surface of phosphorus dendrimers. El Brahmī, N.; **El Kazzouli, S.**; Mignani, S.; Laurent, R.; Ladeira, S.; Caminade, A-M.; Bousmina, M.; Majoral, J-P. *Tetrahedron*. **2017**, 73, 1331. (IF = 2.64).
22. A novel class of ethacrynic acid derivatives as promising drug-like potent generation of anticancer agents with established mechanism of action. Mignani, S. El Brahmī, N. **El Kazzouli, S.**; Eloy, L.; Courilleau, D.; Caron, J. S. Bousmina, M. Caminade, A-M. Cresteil, T. Majoral, J-P. *Eur. J. Med. Chem.* **2016**, 122, 656. (IF = 4.5)
23. Functionalization of Indazoles by Means of Transition Metal-Catalyzed Cross-Coupling Reactions. **El Kazzouli, S.**; Guillaumet, G., *Tetrahedron*. **2016**, 72, 6711. (IF = 2.64)
24. Synthesis and characterization of nanostructured palladium perovskites: Evaluation of their catalytic activity in cross-coupling chemistry, Essoumhi, A. Solhy, A. **El Kazzouli, S.** *J. Mater. Environ. Sci.* **2016**, 7, 1080. (IF = 1.2)
25. Palladium-catalyzed oxidative direct C3- and C7-alkenylations of indazoles: Application to the synthesis of Gamendazole. Naas, M. **El Kazzouli, S.**; Essassi, EM. Bousmina, M.; Guillaumet, G. *Org. Lett.* **2015**, 17, 4320. (IF = 6.4)
26. Advances in direct C-H arylation of 5,5, 6,5 and 6,6- fusedheterocycles containing heteroatoms (N, O, S). **El Kazzouli, S.**; Koubachi, J.; El Brahmī, N.; Guillaumet, G. *RSC Advances*, **2015**, 7, 3915. (IF = 3.4)
27. Investigations in dendrimer space reveal solid and liquid tumor growth-inhibition by original phosphorus-based dendrimers and corresponding monomers and dendrons with ethacrynic acid motifs. El Brahmī, N.; Mignani, S.; Caron, J.; **El Kazzouli, S.**; Bousmina, M.; Caminade, A- M.; Cresteil, T.; Majoral, J-P. *Nanoscale*, **2015**, 7, 3915. (IF = 7.4)
28. Palladium-catalyzed direct C7-arylation of substituted indazoles. Naas, M.; **El Kazzouli, S.**; Essassi, E. M.; Bousmina, M.; Guillaumet, G. *J. Org. Chem.* **2014**, 79, 7286. (IF = 4.6)
29. Ceria-supported copper nanoparticles: A highly efficient and recyclable catalyst for N-arylation of indole. Amadine, O.; Maati, H.; Abdelouhadi, K.; Fihri, A.; **El Kazzouli, S.**; Len, C.; El Bouari, A.; Solhy, A. *Journal of Molecular Catalysis A: Chemical*, **2014**, 395, 409. (IF = 3.7)

30. Functionalization of imidazo[1,2-a]pyridines by means of metal-catalyzed cross-coupling reactions – A review. Koubachi, J.; **El Kazzouli, S.**; Bousmina, M.; Guillaumet, G. *Eur. J. Org. Chem.* **2014**, 24, 5119. (IF = 3.03)
31. Review on Palladium-containing perovskites: Synthesis, physico-chemical properties and applications in catalysis. Essoumhi, A.; **El Kazzouli, S.**; Bousmina, M. *J. Nanosci. Nanotechnol.* **2014**, 14, 2012. (IF = 1.56)
32. Dendrimer Space Exploration: Inhibition of protein-protein interactions for the next generation of pharmaceuticals. Mignani, S.; **El Kazzouli, S.**; Bousmina, M.; Majoral, J-P. *Chem. Rev.* **2014**, 114, 1327. (IF = 48)
33. Dendrimer space concept for innovative nanomedicine: a futuristic vision in medicinal chemistry. Mignani, S.; **El Kazzouli, M.**; Bousmina, M.; Majoral, *Progress in Polymer Science*, **2013**, 38, 993. (IF = 26.84)
34. Original multivalent copper(II)-conjugated phosphorus-dendrimers and corresponding mononuclear copper(II) complexes with anti-tumoral activities. El Brahmī, N. **El Kazzouli, S.** Mignani, S. Essassi, E. Aubert, G. Laurent, R. Caminade, A-M. Bousmina, M. Cresteil, T. Majoral, J-P. *Molecular Pharmaceutics*, **2013**, 10, 1459. (IF = 4.4)
35. Expand classical drug administration ways by emerging routes using dendrimer drug delivery systems: a concise overview. Mignani, S.; **El Kazzouli, M.**; Bousmina, M.; Majoral, J-P. *Advanced Drug Delivery Reviews*, **2013**, 65, 1316. (IF = 12)
36. Copper in dendrimer's synthesis and applications of copper dendrimer systems in catalysis: a concise overview. El Brahmī N.; **El Kazzouli, M.**; Mignani, S.; Bousmina, M.; Majoral, J-P. *Tetrahedron*, **2013**, 69, 3103. (IF = 2.64)
37. Microwave-assisted Suzuki-Miyaura cross-coupling of free (NH) 3-bromoindazoles. Benyahia, A.; Naas, M.; El Brahmī, N.; **El Kazzouli, S.**; Essassi, EM. Majoral, J-P. Guillaumet, G. *Current Org. Chem.* **2013**, 17, 304. (IF = 2.16)
38. Direct C3-Arylations of 1H-Indazoles. Benyahia, A. Naas, M. **El Kazzouli, S.**; Essassi, EM. Guillaumet, G. *Eur. J. Org. Chem.* **2012**, 36, 7075. (IF = 3.03)
39. From Metallodrugs to Metallo-dendrimers for Nanotherapy in Oncology: a Concise Overview. **El Kazzouli, S.**; El Brahmī, N.; Mignani, S.; Bousmina, M.; Zablocka, M.; Majoral, J-P. *Current Med. Chem.* **2012**, 4995. (IF = 3.85)
40. Molecular basis for the failure of the "atypical" C1 domain of Vav1 to bind diacylglycerol/phorbol ester. Gerzy, T.; Peach, M. L.; **El Kazzouli, S.**; Sigano, D. M.; Lewin N. E.; Marquez, V. E.; Blumberg, P. M. *J. Bio. Chem.* **2012**, 287, 13137. (IF = 4.4)
41. Synthesis and fonctionnalisation of imidazo[1,2-a]pyridines and imidazo[1,2-a]pyrimidines on solid phase using Suzuki-Miyaura cross-coupling reactions. **El Kazzouli, S.**; Berteina-Raboin, S.; Mouaddib, A.; Guillaumet, G. *Lett. Org. Chem.* **2012**, 10, 118. (IF = 0.67)
42. Dendrimer therapeutics: covalent and ionic attachments. **El Kazzouli, S.**; Mignani, S.; Bousmina, M.; Majoral, J-P.; *New J. Chem.* **2012**, 36, 227. (IF = 3.08)
43. 26. Design and synthesis of 2-phenylimidazo[1,2-a]pyridines as a novel class of melatonin receptor ligands. **El Kazzouli, S.**; Griffon du Bellay, A.; Berteina-Raboin, S.; Delagrangé, P.; Caignard, D.-H. Guillaumet, G.; *Eur. J. Med. Chem.* **2011**, 46, 4252. (IF = 4.4)
44. 27. N-methyl-substituted fluorescent DAG-indololactone isomers exhibit dramatic differences in membrane interactions and biological activity. Gal N.; Kolusheva S.; Kedei N.; Telek A.; Naem T. A.; Lewin N. E.; Lim, L.; Mannan P.; Garfield S. H.; **El Kazzouli, S.**; Sigano, D. M.; Marquez, V. E.; Blumberg, P. M.; Jelinek R. *ChemBioChem.* **2011**, 12, 2331. (IF = 3.09)
45. 28. Membrane-surface anchoring of charged diacylglycerol-lactones correlates with biological activities. Raifman, O.; Kolusheva, S.; **El Kazzouli, S.**; Sigano, D. M.; Kedei, N.; Lewin, N. E.; Lopez-Nicolas, R.; Ortiz-Espin, A.; Gomez-Fernandez, J. C.; Blumberg, P. M.; Marquez, V. E.; Corbalan-Garcia, S.; Jelinek. R. *ChemBioChem.* **2010** 11, 2003. (IF = 3.09)
46. 29. Conformationally constrained analogues of diacylglycerol. 30. An investigation of diacylglycerol-lactones containing heteroaryl groups reveals compounds with high selectivity for Ras Guanyl Nucleotide-Releasing Proteins. **El Kazzouli, S.**; Lewin, N. E.; Blumberg, P. M.; Marquez V. E. *J. Med. Chem.*, **2008**, 51, 5198. (IF = 5.45)
47. 30. New and efficient Pd(0)-mediated microwave-assisted direct C-3 alkenylation of imidazo[1,2-a]pyridines. Koubachi, J.; **El Kazzouli, S.**; Berteina-Raboin, S.; Mouaddib, A.; Guillaumet, G. *Synthesis*, **2008**, 2537. (IF = 2.7)
48. 31. Conformationally constrained analogues of diacylglycerol (DAG). 29. Cells sort DAG-lactone chemical zip codes to produce diverse and selective biological activities. Duan, D.; Sigano, D. M.; Kelley, J. A.; Lai, C.; Lewin, N. E.; Kedei, N.; Peach, M. L.; Lee, J.; Abeyweera, P. T.; Rotenberg A. S.; Kim, H.; Kim, H. Y.; **El Kazzouli S.**; Chung, J-U.; Howard Y. A.;

- Matthew Y. R.; Alyson B.; Colburn N. H.; Friedman, A. H.; Truman, P. J.; Parrish D. H.; Deschamps J. R.; Perry, N. A.; Surawski, J. R.; Blumberg, P. M.; Marquez, V. E. *J. Med. Chem.*, **2008**, 51, 5371. (IF = 5.45)
49. 32. Efficient microwave-assisted Suzuki-Miyaura cross-coupling reaction of 6-halogenimidazo[1,2-*a*]pyridines. Koubachi, J.; El Kazzouli, S.; Berteina-Raboin, S.; Mouaddib, A.; Guillaumet, G. *J. Mar. Chim. Heterocycl.* **2008**, 7, 1. (IF = 0.82)
50. 33. Efficient and regioselective functionalization of imidazo[1,2-*b*]pyridazines via palladium-catalyzed cross-coupling reaction and S_NAr. Akkaoui, A.; Koubachi, J.; El Kazzouli, S.; Berteina-Raboin, S.; Mouaddib, A.; Guillaumet, G. *Tetrahedron Letters*, **2008**, 49, 2472. (IF = 2.4)
51. 34. Development of new access roads to the imidazo[1,2-*b*]pyridazines di and trisubstituted. El Akkaoui, A.; Koubachi, J.; El Kazzouli, S.; Berteina-Raboin, S.; Mouaddib, A.; Guillaumet, G. *Scientific study & research* **2008**, 9, 259.
52. 35. Synthesis of polysubstitued imidazo[1,2-*a*]pyridines via microwave-assisted one-pot cyclization/Suzuki coupling/palladium-catalyzed heteroarylation. Koubachi, J.; El Kazzouli, S.; Berteina-Raboin, S.; Mouaddib, A.; Guillaumet, G. *J. Org. Chem.* **2007**, 72, 7650. (IF = 4.6)
53. 36. An efficient synthesis of camalexin analogous. Chigr, M.; Oukani, E. H.; El Kazzouli, S.; Mouaddib, A.; Guillaumet, G. *Scientific Study & Research* **2007**, 8, 111.
54. 37. Supported synthesis and fonctionnalization of 2'-deoxyuridine by Suzuki-Miyaura cross-coupling. El Kazzouli, S.; Berteina-Raboin, S.; Agrofoglio, L. *Nucleosides, Nucleotides, Nucleic Acids*, **2007**, 26, 1395. (IF = 1.02)
55. 38. Regioselective palladium-catalyzed arylation and heteroarylation of imidazo[1,2-*a*]pyridines.
56. Koubachi, J.; El Kazzouli, S.; Berteina-Raboin, S.; Mouaddib, A.; Guillaumet, G. *Synlett*, **2006**, 3237. (IF = 2.42)
57. 39. A mild and selective method for *N*-Boc deprotection by Na₂CO₃. El Kazzouli, S.; Koubachi, J.; Berteina-Raboin, S.; Mouaddib, A.; Guillaumet, G. *Tetrahedron Letters*, **2006**, 47, 8575. (IF = 2.4)
58. 40. Synthesis and functionalization of 2-hydroxypyrimido[4,5-*b*][1,4]oxazine. El Kazzouli, S.; Lavecchia, G.; Berteina-Raboin, S.; Guillaumet, G. *Tetrahedron Letters*, **2006**, 47, 4437. (IF = 2.4)
59. 41. Nouvelle voies d'accès aux imidazo[1, 2*a*]pyridines substituées en 3 et 6 par des alcényles et (hétéro)aryle via des réactions pallado-catalysées. Koubachi, J.; El Kazzouli, S.; Berteina-Raboin, S.; Mouaddib, A.; Guillaumet, G. *Scientific study & research* **2006**, 7, 51.
60. 42. Fonctionnalisation "one pot" des positions 3 et 6 d'imidazo[1,2-*a*]pyridines sous irradiation micro-ondes. Koubachi, J.; El Kazzouli, S.; Berteina-Raboin, S.; Mouaddib, A.; Guillaumet, G. *Scientific study & research* **2006**, 7, 895.
61. 43. Une méthode simple, douce et efficace de déprotection du *N*-boc par Na₂CO₃. Koubachi, J.; El
62. Kazzouli, S.; Berteina-Raboin, S.; Mouaddib, A.; Guillaumet, G. *Scientific study & research* **2006**, 7, 893.
63. 44. Synthesis and biological evaluation of *N*-(7-indazolyl)benzenesulfonamide derivatives as potent cell cycle inhibitors. Bouissane, L.; El Kazzouli, S.; Rakib, E. M.; Khouili, M.; Guillaumet, G. *Bioorg. Med. Chem.*, **2006**, 14, 1078. (IF = 2.8)
64. 45. Solution and solid phase functionalization of imidazo[1,2-*a*]pyridines. El Kazzouli, S.; Berthault, A.; Berteina-Raboin, S.; Mouaddib, A.; Guillaumet, G. *Lett. Org. Chem.* **2005**, 184. (IF = 0.67)
65. 46. New and efficient synthesis of bi- and trisubstituted indazoles. Bouissane, L.; El Kazzouli, S.; Leger, J.-M.; Jarry, C.; Rakib, E.M.; Khouili, M.; Guillaumet, G. *Tetrahedron*, **2005**, 61, 8218. (IF = 2.64)
66. 47. Synthesis of 4-substituted and 3, 4-disubstituted indazole derivatives by palladium cross-coupling reactions. El Kazzouli, S.; Khouili, M.; Bouissane, L.; Guillaumet, G. *Tetrahedron Letters*, **2005**, 46, 6163. (IF = 2.4)
67. 48. Nouvelle synthèse de thiazoles sur résine clivable par transestérification. El Kazzouli, S.; Berteina-Raboin, S.; Mouaddib, A.; Guillaumet, G. *J. Mar. Chim. Heterocycl.* **2004**, 3, 1. (IF = 0.82)
68. 49. Synthesis and 1,3-dipolar cycloaddition reactions of new pyrazolo[1,5,4-*ef*][1,5]benzodiazepines. Bouissane, L.; El Kazzouli, S.; Rakib, E. M.; Khouili, M.; Hannioui, A.; Benchidmi, M.; Essassi, E. M.; Guillaumet, G. *Heterocycles*, **2004**, 63, 1651. (IF = 1.08)

69. 50. Solid-phase synthesis of imidazo[1,2-*a*]pyridines and imidazo[1,2-*a*]pyrimidines. **El Kazzouli, S.**; Berteina-Raboin, S.; Mouaddib, A.; Guillaumet, G. *Tetrahedron Letters*, **2003**, 44, 6265. (IF = 2.4)
70. 51. Solid support synthesis of 2,4-disubstituted thiazoles and aminothiazoles. **El Kazzouli, S.**; Berteina-Raboin, S.; Mouaddib, A.; Guillaumet, G. *Tetrahedron Letters*, **2002**, 43, 3193. (IF = 2.4)
71. 52. Influence of polar support for the synthesis of large C-terminal peptide aldehyde: application to chemoselective ligation. Lelièvre, D.; Turpin, O.; **El Kazzouli, S.**; Delmas, A. *Tetrahedron*, **2002**, 58, 5525. (IF = 2.64)

Book Chapters

- 1,4-Dioxins, oxathiins, dithiins and their benzo derivatives, Book chapter, *Reference Module in Chemistry, Molecular Sciences and Chemical Engineering*, Elsevier. Tikad, A.; **El Kazzouli, S.**; Guillaumet, G. **2020**, 2020/1/1. <https://doi.org/10.1016/B978-0-12-818655-8.00015-9>.
- Recent Advances in Oxidative Alkenylation of five and six-membered heterocyclic ring systems, *Targets in Heterocyclic Systems - Chemistry and Properties*, Italian Society of Chemistry. El Brahmī, N.; Koubachi, J.; Guillaumet, G.; **El Kazzouli, S.** **2020**, pp130-157.

Patents

- Novel imidazopyridine derivatives having an affinity with respect to melatonin receptors, method for the preparation thereof and pharmaceutical composition containing said derivatives. PCT, Int. Appl. WO 027474, 2006; *Chem. Abstr.* **2006**, 144, 254132. Guillaumet, G.; Berteina-Raboin, S.; **El Kazzouli, S.**; Delagrange, P.; Caignard, D.-H.

- Activités antitumorales d'une nouvelle famille de dérivés de l'acide ethacrynique, N° de dépôt: 44038, 29/11/2018. PCT, Int. Appl. WO 2020 111921. **El Kazzouli S.**; Abdelmajid, Z.; El Brahmī N.; El Abbouchi A.; Boujdi K.; Bousmina M.; Ait Mouse H.; Tilaoui M.

- Nouveaux composés inhibiteurs de la protéase M^{pro} et de la réplication du SARS-CoV2, leurs formulations et applications **S. El Kazzouli**, N. Touil, E. El Fahime, A. El Abbouchi, M. Hemlali, N. El Brahmī, A. El Alaoui, S. Bounou, M. Bousmina, N° de dépôt de la demande : 53521 au Maroc. Date de dépôt : 12/05/2021

- Nouvelles familles de composés à base de sulfonamides pour le traitement du cancer du sein triple négatif. **El Kazzouli S.**; Abdelmajid, Z.; El Brahmī, N.; El Abbouchi, A.; Saghdani, N.; Idir, A.; Hmina, N.; Ait Mouse H.; Bousmina M. N° de dépôt de la demande: 54773 au Maroc. Date de dépôt : 29/10/2021

Recent Conferences

- Plenary lecture:** *Copper(II)-conjugated phosphorus dendrimers: Synthesis and antitumoral activities.* 1ère Rencontre Internationale de Chimie Moléculaire, Chimétrie et Applications (1ère RICMCA), 29-30 Mai **2014** à la FST de Beni Mellal, Morocco.
- Invited lecture:** Présentation des applications biotechnologiques & nanotechnologiques dans le domaine pharmaceutique et Drug Design, Journée de la Biotechnologie, 19 March **2015**, CNRST, Rabat, Morocco.
- Invited lecture:** Functionalisation of indazoles by direct arylation and oxydative alkenylation, 30 June **2015**, Centre international universitaire pour la recherche, Orleans, France.
- Invited lecture:** Synthesis of phosphorus dendrimers functionalized by copper or ethacrynic acid derivatives: Evaluation of their anticancer activities. 08 July **2015**, Institut de Chimie Organique et Analytique, University of Orléans, France.
- Invited lecture:** Direct C-H arylation and alkenylation of indazoles. 11 March **2016**, 5th Spanish-Moroccan Symposium on Organic Chemistry, Casablanca, Morocco.
- Invited lecture:** Fonctionnalisation de l'imidazo[1,2-*a*]pyridine et de l'indazole par des réactions d'arylation directe et d'alcénylation oxydative, 6^{ème} Rencontre Internationale sur la Chimétrie, la Qualité et la Chimie Moléculaire, 22 April **2016**, Beni Mellal, Morocco.
- Oral presentation:** Synthesis of new drug-phosphorus dendrimer conjugates and their evaluation as anticancer agents 28 July **2016**, Lyon, France.

8. **Invited lecture:** Synthesis and biological evaluation of a novel class of ethacrynic acid derivatives, Workshop International “Molécules Bioactives et Biomatériaux” 24/03/2017, FST Mohammedia, University of Casablanca.
9. **Invited lecture :** Fonctionnalisation des indazoles et azaindazoles par des réactions d’activation de la liaison C-H, 10ème édition du Colloque Franco-Roumain de Chimie Appliquée (COFrRoCA) 26-28/06/2018, University of Bacau, Romania.
10. Video Conference, C-H functionalization of indazoles and azaindazole, 19th Global Chemistry conferences, 20-21 March 2019, New York, USA
11. **Keynote conference,** Synthesis and biological applications of dendrimers, 2th International Conference on Material Science and Material Chemistry, 20-21 March 2019, London, UK
12. **Invited lecture:** Design and synthesis of drug-loaded dendrimers as anticancer agents, International conference in applied and theory of nanostructures, 18-18 June 2019, Kenitra, Morocco

Oral and Poster Presentations

More than 100 oral and poster presentations from 2001 to 2021.

Funding and Projects

2011: Funding from COST program (European program) for a project on bioapplication of functional dendrimers (Ph.D. training, **Nabil El Brahmi**, PhD in LCC, CNRS of Toulouse, France, and participation in meeting for two researchers from MAScIR-INANOTECH).

2011: June-December: Funding from EGID “France” for six-month training for Ph.D. Student **Mohamed Ali Ben-Yahia**, PhD, Synthesis of bioactive indazole analogues (ICOA, University of Orleans France).

2012-2015: February-July: Funding from EGID “France” for a Ph.D. Student **Mohammed Naas**, PhD, Synthesis of bioactive molecules (ICOA, University of Orleans France).

2015-2017: Funding from EGID “France” (ICOA, University of Orleans France) financial support for a Ph.D. program Co-tutelle. (**Soukaina Farrasse**, PhD).

2015-2017: Funding from CNRST “scholarship” (**Khadija Gambouz**, PhD).

2015 : Funding from CNRST, Appel à projets dans les domaines prioritaires de la recherche (820 000 Dh) (**Khalid Boujdi**, PhD)

2016 : Funding from CNRST, Appel à projets PHC (Toubkal) (30 000 Euro) (**Kamal Jouad**, PhD).

2019 : Funding from CSIC Sevilla, Appel à projets Icoop+ 2019 (24 000 Euro) (**Khaoula Ounejli**)

2021 : Funding from the Academy Hassan 2 of Sciences and Technology (Anti-SARS-CoV2 to treat Covid-19). 580 000 Dh. and 300 000 Dh from Euromed University (**Abdelmoula El Abbouchi** (post-doc) et **Abdelali Chihab** (PhD))

Referee, Organization of conferences, Ranking and Member of editorial boards

- * Referee of different scientific journals (Journal of Organic Chemistry, European Journal of Organic Chemistry, Current Organic Chemistry, RSC Advances ...).
- * Member of the Editorial Board of the *Journal Marocain de Chimie Hétérocyclique*.
- * Member of the Editorial Board of the *Mediterranean Journal of Chemistry*.
- * Member of the Editorial Board of the *Current Microwave Chemistry*.
- * Organisation of an International workshop on « Chimie Bio-Organique et Médicinale : Perspectives Thérapeutiques et pour la Recherche Pharmaceutique » 22th March 2017.
- * Guest Editor of a Special Issue 2020 in *Molecules*
- * Top 50 of the Moroccan scientists in 2021; #6 in chemical sciences (AD Scientific Index 2021).