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Research interests

Synthetic methodology in organic chemistry : transition metal catalysis, fluorine and sulfur chemistry, hydrometallation reaction, heterocyclic synthesis, and asymmetric catalysis.

Academic position and education

Jul. 2022	HDR – Habilitation – University of Strasbourg
Since Oct. 2016	CNRS Researcher – UHA – Unistra – CNRS, LIMA UMR 7042 (Team BSM: Dr. N. Blanchard)
Aug. 2014 – Jul. 2016	Post-doctoral associate – University of Geneva, Switzerland, Pr. C. Mazet
Feb. 2013 – Jul. 2014	Post-doctoral associate – RWTH Aachen, Germany, Pr. C. Bolm (<i>Humboldt Fellowship</i>)
Oct. 2009 – Dec. 2012	PhD in Organic Chemistry – INSA of Rouen, UMR CNRS 6014, Dr. D. Cahard .

Major funding and awards

2022	Selected as Early Career Advisory Board member for Tetrahedron and Tetrahedron Letters
2021	Collaborative ANR funding - PRC (associate coordinator) – SulFive
2018	Young investigator ANR funding – JCJC (coordinator) – HydroMet
2013	Alexander von Humboldt Postdoctoral Fellowship co-funded by BASF

Bibliometrics (July 2022)

H-index: 18	Research and review articles: 31
Number of citations: > 1200	Book chapter: 2

Complete publication list

31) Synthesis and further use of SF₅-alkynes as platforms for the design of more complex SF₅-containing products

Popek, L.; Nguyen, T.-M.; Blanchard, N.; Cahard, D.; Bizet, V. *Tetrahedron* **2022**, *117-118*, 132814.

30) Synthesis and Physicochemical Properties of 2-SF₅-(Aza)Indoles, a New Family of SF₅ Heterocycles

Debrauwer, V.; Leito, I.; Lökov, M.; Tshepelevitsh, S.; Parmentier, M.; Blanchard, N.;* [Bizet, V.](#)*
ACS Org. Inorg. Au **2021**, *1*, 43-50.

29) Ligand-Controlled Regiodivergent PalladiumCatalyzed Hydrogermylation of Ynamides

Debrauwer, V.; Turlik, A.; Rummler, L.; Prescimone, A.; Blanchard, N.;* Houk, K. N.;* [Bizet, V.](#)*
J. Am. Chem. Soc. **2020**, *142*, 11153-11164.
Highlighted in: Actualités de l'INC CNRS, 9 octobre 2020 (link).

28) Pentafluorosulfanyl chloride

Burton, D. J.; Wang, Y.; [Bizet, V.](#); Cahard, D. *e-EROS Encyclopedia of Reagents for Organic Synthesis*.
Wiley, **2020**, DOI:10.1002/047084289X.rn00413.pub2.

27) Optimized Synthesis of 7-Azaindazole by a Diels–Alder Cascade and Associated Process Safety

Brach, N.; Le Foulher, V.; [Bizet, V.](#); Lanz, M.; Gallou, F.; Bailly, C.; Hoehn, P.; Parmentier, M.; Blanchard N.*
Org. Process Res. Dev. **2020**, *24*, 776-786.

26) Activating Pyrimidines by Pre-distortion for the General Synthesis of 7-Aza-indazoles from 2-Hydrazonylpyrimidines via Intramolecular Diels–Alder Reactions

Le Foulher, V.; Chen, Y.; Gandon, V.; [Bizet, V.](#); Salomé, C.; Fessard, T.; Liu, F.;* Houk, K. N.;* Blanchard N.*
J. Am. Chem. Soc. **2019**, *141*, 15901-15909.

25) Acid Fluorides in Transition-Metal Catalysis: A Good Balance between Stability and Reactivity

Blanchard N.; [Bizet, V.](#)* *Angew. Chem. Int. Ed.* **2019**, *58*, 6814-6817.

24) Diels–Alder and Formal Diels–Alder Cycloaddition Reactions of Ynamines and Ynamide

Duret, G.; Le Foulher, V.; Bisseret, P.; Bizet, V.; Blanchard N. *Eur. J. Org. Chem* **2017**, 6816-6830.

23) Mechanistic Investigation of the Pd-Catalyzed Intermolecular Carboetherification and Carboamination of 2,3-Dihydrofuran: Similarities, Differences and Evidence for Unusual Reaction Intermediates

Borrajo Calleja, G. M.; [Bizet, V.](#); Besnard, C.; Mazet C.* *Organometallics* **2017**, *36*, 3553-3563.

22) Influence of the dissolution solvent on the cytotoxicity of octahedral cationic Ir(III) hydride complexes

Huang, H.; Humbert, N.; [Bizet, V.](#); Patra, M.; Chao, H.;* Mazet, C.;* Gasser G.* *J. Organomet. Chem.* **2017**, *839*, 15-18.

21) Direct Access to Furoindolines by Palladium-Catalyzed Intermolecular Carboamination

[Bizet, V.](#); Borrajo Calleja, G. M.; Besnard, C.; Mazet C.* *ACS Catal.* **2016**, *6*, 7183-7187.
Highlighted in: Synfacts **2016**, *12*, 1257 (link).

20) Palladium Catalyzed Enantioselective Intermolecular Carboetherification of Dihydrofurans

Borrajo Calleja, G. M.; [Bizet, V.](#); Mazet C.* *J. Am. Chem. Soc.* **2016**, *138*, 4014-4017.
Highlighted in: Synfacts **2016**, *12*, 591 (link).

19) Access to Enantioenriched 2,3- and 2,5-Dihydrofurans With a Fully substituted C2 Stereocenter by Pd-Catalyzed Asymmetric Intermolecular Heck Reaction

Borrajó Calleja, G. M.; Bizet, V.; Bürgi, T.; Mazet C.* *Chem. Sci.* **2015**, *6*, 4807-4811.

Highlighted in: Synfacts **2015**, *10*, 1075 (link).

18) Sulfur Imidations: Access to Sulfinimides and Sulfoximines

Bizet, V.; Hendrix, C. M. M.; Bolm, C.* *Chem. Soc. Rev.* **2015**, *44*, 3378-3390.

17) Direct Access to *N*-Alkyl Sulfoximines from Sulfides by a Sequential Imidation/Oxidation Procedure

Dannenberg, C. A.; Bizet, V.*; Bolm, C.* *Synthesis* **2015**, *47*, 1951-1959.

16) Sulfur Imidations by Light-Induced Ruthenium-Catalyzed Nitrene Transfer Reactions

Bizet, V.; Bolm, C.* *Eur. J. Org. Chem.* **2015**, 2854-2860.

15) Transition-Metal-Free Oxidative Iodination of 1,3,4-Oxadiazoles

Dannenberg, C. A.; Bizet, V.; Zou, L. H.; Bolm, C. *Eur. J. Org. Chem.* **2015**, 77-80.

14) Methionine and Buthionine Sulfoximine: Syntheses under Mild and Safe Imidation/Oxidation Conditions

Buglioni, L.; Bizet, V.; Bolm, C.* *Adv. Synth. Catal.* **2014**, *356*, 2209-2213.

13) Fluorine as a Control Element in Asymmetric Synthesis

Bizet, V.; Cahard, D.* *Chimia* **2014**, *68*, 378-381.

12) Light-Induced Ruthenium-Catalyzed Nitrene Transfer Reactions: A Photochemical Approach towards *N*-Acyl Sulfinimides and Sulfoximines

Bizet, V.; Buglioni, L.; Bolm, C.* *Angew. Chem. Int. Ed.* **2014**, *53*, 5639-5642.

11) Fluorinated sulfoximines : syntheses, properties and applications

Bizet, V.; Kowalczyk, R.; Bolm, C.* *Chem. Soc. Rev.* **2014**, *43*, 2426-2438.

10) Recent progress in asymmetric fluorination and trifluoromethylation reactions

Bizet, V.; Besset, T.; Ma, J.-A.; Cahard, D.* *Curr. Top. Med. Chem.* **2014**, *14*, 901-614.

9) The influence of fluorine in asymmetric catalysis

Bizet, V.; Cahard, D.* *Chem. Soc. Rev.* **2014**, *43*, 135-147.

8) Iron (II) complexes are suitable catalysts for the isomerization of trifluoromethylated allylic alcohols.

Synthesis of trifluoromethylated dihydrochalcones

Cahard, D.*; Bizet, V.; Dai, X.; Gaillard, S.; Renaud, J.-L.* *J. Fluorine Chem.* **2013**, *155*, 78-82.

7) Isomérisation rédox : une réaction économe en atomes à fort potentiel d'innovation

Bizet, V.; Cahard, D.*; Gaillard, S.; Renaud, J.-L.* *Les Techniques de l'Ingénieur* **2013**, IN 159.

6) Ruthenium-catalyzed one-pot tandem isomerization-transfer hydrogenation reactions of γ -trifluoromethylated allylic alcohols and β -trifluoromethylated enones

Bizet, V.; Pannecoucke, X.; Renaud, J.-L.*; Cahard, D.* *Adv. Synth. Catal.* **2013**, *355*, 1394-1402.

5) Synthesis of β -CF₃ ketones from trifluoromethylated allylic alcohols by ruthenium catalyzed isomerization

Bizet, V.; Pannecoucke, X.; Renaud, J.-L.; Cahard, D.* *J. Fluorine Chem.* **2013**, *152*, 56-61.

4) *N*-Fluorobenzensulfonimide

Bizet, V.* *Synlett* **2012**, *23*, 2719-2720.

3) Ruthenium catalyzed redox isomerization of trifluoromethylated allylic alcohols: mechanistic evidence for an enantiospecific pathway

Bizet, V.; Pannecoucke, X.; Renaud, J.-L.*; Cahard, D.* *Angew. Chem. Int. Ed.* **2012**, 51, 6467-6470.

Highlighted in: CNRS, en direct des laboratoires de l'institut de chimie (Link).

2) Synthesis of α -CF₃-substituted carbonyl compounds with relative and absolute stereocontrol using electrophilic CF₃-transfer reagents

Matoušek, V.; Togni, A.*; Bizet, V.; Cahard, D.* *Org. Lett.* **2013**, 13, 5762-5765.

1) Metal-Free SN2' Decarboxylative Rearrangement of β -Keto Esters

Bizet, V.; Lefebvre, V.; Baudoux, J.*; Lasne, M.-C.; Boulangé, A.; Leleu, S.*; Franck, X.; Rouden, J.* *Eur. J. Org. Chem.* **2011**, 4170-4175.

List of book chapters:

2) Oxetanes and Oxetenes: Fused-Ring Derivatives

Blanchard, N.*; Bizet, V.; Brach, N., Rummler, L.; Kaliappan, K. P. in *Comprehensive Heterocyclic Chemistry IV*, Vol. 2 (Eds.: D. S. Black, J. Cossy, C. V. Stevens), Elsevier, Oxford, **2022**, pp. 257-286.

1) Asymmetric fluorination methods and their application for the stereoselective synthesis of fluorinated drugs

Bizet, V.; Cahard, D.* in *"Stereoselective Synthesis of Drugs and Natural Products"* (Chapter 44), Ed. Wiley-Blackwell. **2013**, ISBN: 978-1-1180-3217-6, pp. 1347-1376.