

RESEARCH OUTPUT of Katharina M. Fromm (past 5 years)

(Full list under http://frommgroup.ch/?page_id=463)

Publications in peer-reviewed scientific journals

2019

Sequential multi-target sensor: In³⁺, Fe²⁺ and Fe³⁺ discrimination by anthracene-base probe

A. Finelli, V. Chabert, N. Héroult, A. Crochet, C. Kim, K. M. Fromm, *Inorg. Chem.*, **2019**, *58*, *20*, 13796-13806. [DOI: 10.1021/acs.inorgchem.9b01478](https://doi.org/10.1021/acs.inorgchem.9b01478).

Anion-induced structural diversity of Zn and Cd coordination polymers based on bis-9,10-(pyridine-4-yl)-anthracene, their luminescent properties and highly efficient sensing of nitro derivatives and herbicides

S. I. Vasylevskiy, D. M. Bassani, K. M. Fromm, *Inorg. Chem.* **2019**, *58*, *9*, 5646-5653. [DOI: 10.1021/acs.inorgchem.8b03628](https://doi.org/10.1021/acs.inorgchem.8b03628)

New Ni_{0.5}Ti₂(PO₄)₃@C Nasicon-type electrode material with high rate capability performance for Lithium-ion batteries: Synthesis and Electrochemical properties

I. Saadoune, M. Srout, N.-H. Kwon, L. Wen, A. Züttel, K. M. Fromm, *ChemSusChem*, **2019**, *12*, 1-9. [DOI: 10.1002/cssc.201902002](https://doi.org/10.1002/cssc.201902002)

Different coordination abilities of 1,7- and 4,7-phenanthroline in the reactions with copper(II) salts: structural characterization and biological evaluation of the reaction products

N. Lj. Stevanović, T. P. Andrejević, A. Crochet, T. Ilic-Tomic, N. S. Drašković, J. Nikodinovic-Runic, K. M. Fromm, Miloš I. Djuran, Biljana Đ. Glišić, *Polyhedron*, **2019**, *173*, 114112. [DOI: 10.1016/j.poly.2019.114112](https://doi.org/10.1016/j.poly.2019.114112)

Tautomerism as primary signalling mechanism in metal sensing: the case of amide group

V. V. Deneva, G. Dobrikov, A. Crochet, D. Nedeltcheva, K. M. Fromm and Liudmil Antonov, *Beilstein Arch.* **2019**, 201923. [DOI: 10.3762/bxiv.2019.23.v1](https://doi.org/10.3762/bxiv.2019.23.v1)

Compartmentalization of Alkaline Earth Metals in Salen-type Cu- and Ni-Complexes in Solution and in the Solid State

A. Finelli, N. Héroult, A. Crochet, K. M. Fromm, *ACS Omega* **2019**, *4*, *6*, 10231-10242. [DOI: 10.1021/acsomega.9b00365](https://doi.org/10.1021/acsomega.9b00365)

Anion-induced structural diversity of Zn and Cd coordination polymers based on bis-9,10-(pyridine-4-yl)-anthracene, their luminescent properties and highly efficient sensing of nitro derivatives and herbicides

S. I. Vasylevskiy, D. M. Bassani, K. M. Fromm, *Inorganic Chemistry* **2019**, *58*, *9*, 5646-5653. [DOI: 10.1021/acs.inorgchem.8b03628](https://doi.org/10.1021/acs.inorgchem.8b03628)

Silver(I) complexes with 4,7-phenanthroline efficient in rescuing the zebrafish embryos of lethal *Candida albicans* infection

A. Pavic, N. D. Savić, B. Đ. Glišić, A. Crochet, S. Vojnovic, A. Kurutos, D. Stanković, K. M. Fromm, J. Nikodinovic-Runic, M. Djuran, *Journal of Inorganic Biochemistry* **2019**, *195*, 149-163. [DOI: 10.1016/j.jinorgbio.2019.03.017](https://doi.org/10.1016/j.jinorgbio.2019.03.017)

Synthesis and structural analysis of polynuclear silver(I) complexes with 4,7-phenanthroline

I. Stanojević, N. D. Savić, A. Crochet, K. M. Fromm, M. I. Djuran, B. Đ. Glišić, *Journal of Serbian Chemical Society* **2019**, accepted. DOI: [10.2298/JSC190226024S](https://doi.org/10.2298/JSC190226024S)

Isomerization and aggregation of 2-(2-(2-hydroxy-4-nitrophenyl)hydrazono)-1-phenylbutane-1,3-dione: recent evidences from theory and experiment

S. Hristova, F. S. Kamounah, A. Crochet, P. E. Hansen, K. M. Fromm, D. Nedeltcheva, L. Antonov, *Journal of Molecular Liquids* **2019**, 283, 242-248. DOI: [10.1016/j.molliq.2019.03.073](https://doi.org/10.1016/j.molliq.2019.03.073)

Synthesis and Applications of Nanocontainers and Nanorattles

S.-L. Abram, P. Yep, K. M. Fromm, *Chimia* **2019**, 73, 12-16. DOI: [10.2533/chimia.2019.12](https://doi.org/10.2533/chimia.2019.12)

Functional Polymers Through Mechanochemistry

S. Schrettl, D. W. R. Balkenende, C. Calvino, M. Karman, A. Lavrenova, L. N. Neumann, Y. Sagara, E. Verde-Sesto, M. di Giannantonio, Y. C. Simon, K. M. Fromm, M. Lattuada, C. Weder, *Chimia* **2019**, 73, 7-11. DOI: [10.2533/chimia.2019.7](https://doi.org/10.2533/chimia.2019.7)

Border cases of azo and hydrazo tautomers as possible NMR reference compounds

V. Deneva, A. Lyčka, S. Hristova, A. Crochet, K. M. Fromm, L. Antonov, *Dyes and Pigments* **2019**, 165, 157-163. DOI: [10.1016/j.dyepig.2019.02.015](https://doi.org/10.1016/j.dyepig.2019.02.015)

2018

Metalocene as Mechanophore in Polymers Leads to Metal Ion Release & Oxidation (Highlight)

Michela Di Giannantonio, Mathieu A. Ayer, Ester Verde-Sesto, Marco Lattuada, Christoph Weder, Katharina M. Fromm, *Chimia* **2018**, 72, 12, 902. DOI: [10.2533/chimia.2018.902](https://doi.org/10.2533/chimia.2018.902)

A Review: Carbon Additives in LiMnPO₄- and LiCoO₂-Based Cathode Composites for Lithium Ion Batteries

N.-H Kwon, D. Mouck-Makanda, K. M. Fromm, *Batteries* **2018**, 4, 50-73. DOI: [10.3390/batteries4040050](https://doi.org/10.3390/batteries4040050)

Betti Bases from 4-(3-Pyridazo)-1-naphthol: Synthesis, Coordination Behaviour and Unusual Substitution Reactions

V. B. Kurteva, L. A. Lubenov, B. L. Shivachev, R. P. Nikolova, K. M. Fromm, *ChemistrySelect* **2018**, 3, 12017–12021. DOI: [10.1002/slct.201802745](https://doi.org/10.1002/slct.201802745)

Polyaspartamide Functionalized Catechol-Based Hydrogels Embedded with Silver Nanoparticles for Antimicrobial Properties

M. Tan, Y. Choi, J. Kim, J.-H. Kim, K. M. Fromm, *Polymers* **2018**, 10, 1188-1203. DOI: [10.3390/polym10111188](https://doi.org/10.3390/polym10111188)

Solid-state structure and anti-microbial and cytotoxicity studies of a cucurbit[6]uril-like Cu₆L₄ constructed from 3,5-bis-[(1H-tetra-zol-5-yl)meth-yl]-4H-1,2,4-triazol-4-amine

S. Vasylevskyi, A. Holzheu, K. M. Fromm, *Acta Cryst. C* **2018**, C74, 1413-1419. DOI: [10.1107/S2053229618013670](https://doi.org/10.1107/S2053229618013670)

Mononuclear silver(I) complexes with 1,7-phenanthroline as potent inhibitors of Candida growth

N. D. Savić, S. Vojnovic, B. Đ.Glišić, A. Crochet, A. Pavic, G. V. Janjić, M. Pekmezović, I. M. Opsenica, K. M. Fromm, J. Nikodinovic-Runic, M. I. Djuran, *Eur. J. Med. Chem.* **2018**, *156*, 760-773. DOI: 10.1016/j.ejmech.2018.07.049

Alpha-helical folding of SiIE models upon Ag(His)(Met) motif formation

V. Chabert, M. Hologne, O. Sénèque, O. Walker, K. M. Fromm, *Chem. Comm.* **2018**, *54*, 10419-10422. DOI: 10.1039/c8cc03784a

Trithiocarbonate-Functionalized PNiPAAm-Based Nanocomposites for Antimicrobial Properties

M. Tan, L. Horvath, P. S. Brunetto and K. M. Fromm, *Polymers* **2018**, *10*(6), 665-690.

DOI: [10.3390/polym10060665](https://doi.org/10.3390/polym10060665)

Triggered metal ion release and oxidation: Ferrocene as new mechanophore in polymers

M. Di Giannantonio, M. A. Ayer, E. Verde-Sesto, M. Lattuada, C. Weder, K. M. Fromm, *Angew. Chem., Int. Ed.* **2018**, online. DOI: [10.1002/anie.201803524](https://doi.org/10.1002/anie.201803524) also available in German in *Angew. Chem.* **2018**, online. DOI: [10.1002/ange.201803524](https://doi.org/10.1002/ange.201803524)

Early stage sustainability evaluation of new, nanoscale cathode materials for Li-ion batteries

R. Hischer, N.-H. Kwon, J.-P. Brog, K. M. Fromm, *ChemSusChem* **2018**, *11*, 13, 2068-2076. DOI: [10.1002/cssc.201800109](https://doi.org/10.1002/cssc.201800109)

Amide Neighbouring-Group Effects in Peptides: Phenylalanine as Relay Amino Acid in Long-Distance Electron Transfer

J. G. Nathanael, L. F. Gamon, M. Cordes, P. R. Rablen, T. Bally, K. M. Fromm, B. Giese, U. Wille, *ChemBioChem*, **2018**, *19*, 922-926. DOI: [10.1002/cbic.201800098](https://doi.org/10.1002/cbic.201800098)

A Concept for stimulated proton transfer in 1-(phenyldiazenyl)naphtalen-2ols

S. Hristova, V. Deneva, M. Pittelkow, A. Crochet, F. S. Kamounah, K. M. Fromm, P. E. Hansen, L. Antonov, *Dyes and Pigments* **2018**, *156*, 91-99. DOI: [10.1016/j.dyepig.2018.03.070](https://doi.org/10.1016/j.dyepig.2018.03.070)

Versatile synthesis of chiral 6-oxoverdazyl radical ligands – new building blocks for multifunctional molecule-based magnets

A. B. Solea, T. Wohlhauser, P. Abbasi, Y. Mongbanziama, A. Crochet, K. M. Fromm, G. Novitchi, C. Train, M. Pilkington, O. Mamula, *Dalton Trans.* **2018**, *47*, 4785-4789. DOI: [10.1039/C8DT00840J](https://doi.org/10.1039/C8DT00840J)

Ag Nanoencapsulation for Antimicrobial Applications

S.-L. Abram, J. Gagnon, M. Priebe, N. Héroult, K. M. Fromm, *Chimia* **2018**, *72*, 249-253. cover. DOI: [10.2533/chimia.2018.249](https://doi.org/10.2533/chimia.2018.249)

Puckering behavior in six new phosphoric triamides containing aliphatic six- and seven-membered ring groups and a database survey of analogous ring-containing structures

B. V. Alviri, M. Pourayoubi, A. Saneei, M. Keikha, A. van der Lee, A. Crochet, A. Ajees, M. Nečas, K. M. Fromm, K. Damodaran, T. A. Jenny, *Tetrahedron* **2018**, *74*, *1*, 28-41. DOI: [10.1016/j.tet.2017.11.030](https://doi.org/10.1016/j.tet.2017.11.030)

Threading Salen-type Cu- and Ni-Complexes into One-Dimensional Coordination Polymers: Solution versus Solid State and the Size Effect of the Alkali Metal Ion

A. Finelli, N. Héroult, A. Crochet, K. M. Fromm, *Cryst. Growth Des.* **2018**, *2*, 1215-1226. DOI: [10.1021/acs.cgd.7b01769](https://doi.org/10.1021/acs.cgd.7b01769)

WRI1 and DGAT1 regulate tocochromanol metabolism in arabidopsis

S. Pellaud, A. Bory, V. Chabert, J. Romanens, L. Chaisse-Leal, A. V. Doan, L. Frey, A. Gust, K. M. Fromm, L. Mène-Saffrané, *New Phytologist* **2018**, *217*, 245–260. DOI: [10.1111/nph.14856](https://doi.org/10.1111/nph.14856)

Cis- and Trans-9,10-di(1H-imidazol-1-yl)-anthracene based coordination polymers of Zn^{II} and Cd^{II}: synthesis, crystal structures and luminescence properties

S. I. Vasylevskiy, K. Regeta, A. Ruggi, S. Petoud, C. Piguët, and K. M. Fromm, *Dalton Trans.*, **2018**, *47*, 596-607. DOI: [10.1039/C7DT03758A](https://doi.org/10.1039/C7DT03758A)

The synergistic cooperation of NH...O and CH...O hydrogen bonds in the structures of three new phosphoric triamides

A. Saneei, M. Pourayoubi, J. P. Jasinski, T. A. Jenny, A. Crochet, K. M. Fromm & A. C. Keeley, *Phosphorus, Sulfur, and Silicon and the Related Elements*, **2018**, *193*, 257-266 . DOI: [10.1080/10426507.2017.1399128](https://doi.org/10.1080/10426507.2017.1399128)

2017

Characteristics and properties of nano-LiCoO₂ synthesized by pre-organized single source precursors: Li-ion diffusivity, electrochemistry and biological assessment

J.-P. Brog, A. Crochet, J. Seydoux, M. J. D. Clift, B. Baichette, S. Maharajan, H. Barosova, P. Brodard, M. Spodaryk, A. Züttel, B. Rothan-Rutishauser, N.-H. Kwon, K. M. Fromm, *J Nanobiotechnol* **2017**, *15*, 58. DOI: [10.1186/s12951-017-0292-3](https://doi.org/10.1186/s12951-017-0292-3)

Influence of the Sacrificial Polystyrene Removal Pathway on the TiO₂ Nanocapsule Structure

N. Herault, K. M. Fromm, *Helv. Chim. Acta* **2017**, *100*(6), e1700014. DOI: [10.1002/hlca.201700014](https://doi.org/10.1002/hlca.201700014)

Different molecular assemblies in two new phosphoric triamides with the same C(O)NHP(O)(NH)₂ skeleton: crystallographic study and Hirshfeld surface analysis

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Influence of anions and solvent molecules on the packing and emission spectra of coordination polymers based on silver ions and an anthracene derivative

J. Chen, N. Voutier, J. Rajabi, A. Crochet, D. M. Bassani, K. M. Fromm, *CrysEngComm* **2017**, *19*, 5106-5113. DOI: [10.1039/C7CE00846E](https://doi.org/10.1039/C7CE00846E)

Model peptide studies of Ag⁺ binding sites from the silver resistance protein SilE

V. Chabert, M. Hologne, O. Sénèque, A. Crochet, O. Walker, K. M. Fromm, *Chem. Commun.* **2017**, *53*, 6105–6108. DOI: [10.1039/c7cc02630g](https://doi.org/10.1039/c7cc02630g)

Quantitative Nano-characterization of Polymers Using Atomic Force Microscopy

M. Radiom, S. Kozhuharov, P. Kong, M. di Giannantonio, M. Ayer, P. Maroni, A. F. M. Kilbinger, K. M. Fromm, C. Weder, M. Borkovec, *Chimia* **2017**, *71*(4), 195-198. DOI: [10.2533/chimia.2017.195](https://doi.org/10.2533/chimia.2017.195)

Formation of silver nanoparticles by electron transfer in peptides and c-cytochromes

S. I. Vasylevskiy, S. Kracht, P. Corcosa, K. M. Fromm, B. Giese, M. Füg, *Angew. Chem. Int. Ed.* **2017**, *56*, 5926 –5930. DOI: [10.1002/anie.201702621](https://doi.org/10.1002/anie.201702621)

Heptacoordinate Co(II) complex: a new architecture for photochemical hydrogen production

F. Lucarini, M. Pastore, S. I. Vasylevskiy, M. Varisco, E. Solari, A. Crochet, K. M. Fromm, F. Zobi, A. Ruggi, *Chem. Eur. J.* **2017**, *23*, 6768-6771, DOI: [10.1002/chem.201701427](https://doi.org/10.1002/chem.201701427)

Embedding CeO₂ nanocontainers in a TiO₂ coating on glass surfaces

J. Gagnon, R. A. Caruso, and K. M. Fromm, *AIMS Bioengineering* **2017**, *4*(1), 171-178.

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M. Priebe, J. Widmer, N. Suhartha Löwa, S.-L. Abram, I. Mottas, A.-K. Woischnig, P. S. Brunetto, N. Khanna, C. Bourquin, K. M. Fromm, *Nanomedicine: NBM* **2017**, *13*(1), 11-22. DOI:

[10.1016/j.nano.2016.08.002](https://doi.org/10.1016/j.nano.2016.08.002)

Nanoparticle shapes of LiMnPO₄, Li⁺-diffusion orientation and diffusion coefficients for high volumetric energy Li⁺-ion cathodes

N.-H. Kwon, H. Yin, T. Vavrova, J. H.-W. Lim, U. Steiner, B. Grob ty, K. M. Fromm, *J. Power Sources* **2017**, *342*, 231-240. DOI: [10.1016/j.jpowsour.2016.11.111](https://doi.org/10.1016/j.jpowsour.2016.11.111)

2016

Going nano for batteries and drug delivery

S.-L. Abram, J.-P. Brog, P. S. Brunetto, A. Crochet, J. Gagnon, N.-H. Kwon, S. Maharajan, M. Priebe, K. M. Fromm, *Chimia* **2016**, *70*(9), 661. DOI:[10.2533/chimia.2016.661](https://doi.org/10.2533/chimia.2016.661)

Tandem ring-opening-ring-closing metathesis for functional metathesis catalysts

A. A. Nagarkar, M. Yasir, A. Crochet, K. M. Fromm, A. F. M. Kilbinger, *Angew. Chem., Int. Ed.* **2016**, *55*, 12343-12346. DOI: [10.1021/ja4039278](https://doi.org/10.1021/ja4039278)

Crystal structures of a copper(II) and the isotopic nickel(II) and palladium(II) complexes of the ligand (E)-1-[(2,4,6-tribromophenyl)diazanyl]naphthalen-2-ol

S. Chetioui, D.-A. Rouag, J.-P. Djukic, C. G. Bochet, R. Touzani, C. Bailly, A. Crochet and K. M. Fromm, *Acta Cryst.* **2016**, *72*(8), 1093-1098. DOI:[10.1107/S205698901601080X](https://doi.org/10.1107/S205698901601080X)

Synthesis of new polyether ether ketone derivatives with silver binding site and coordination compounds of their monomers with different silver salts

J. Girard, N. Joset, A. Crochet, M. Tan, A. Holzheu, P. S. Brunetto, K. M. Fromm, *Polymers* **2016**, *8*(6), 208. DOI:[10.3390/polym8060208](https://doi.org/10.3390/polym8060208)

Synthesis, characterization, antibacterial activity and cytotoxicity of hollow TiO₂-coated CeO₂ nanocontainers encapsulating silver nanoparticles for controlled silver release

J. Gagnon, M. J. D. Clift, D. Vanhecke, I. E. Widner sson, S.-L. Abram, A. Petri-Fink, R. A. Caruso, B. Rothen-Rutishauser, K. M. Fromm, *J. Mater. Chem. B* **2016**, *4*(6), 1166-1174. DOI:

[10.1039/c5tb01917f](https://doi.org/10.1039/c5tb01917f)

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A thermo- and mechanoresponsive cyano-substituted oligo(p-phenylene vinylene) derivative with five emissive states

Y. Sagara, A. Lavrenova, A. Crochet, Y. C. Simon, K. M. Fromm, C. Weder, *Chem. Eur. J.* **2016**, *22*(13), 4374–4378. DOI: [10.1002/chem.201600272](https://doi.org/10.1002/chem.201600272)

Preventing implant-associated infections by silver coating

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The first phosphoramidate–mercury(II) complex with a Cl₂ Hg–OP[N(C)(C)]₃ segment

A. Saneei, M. Pourayoubi, A. Crochet, K. M. Fromm, *Acta Crystallogr. C. Struct. Chem.* **2016**, *72*(3), 230-233. DOI: [10.1107/S2053229616002394](https://doi.org/10.1107/S2053229616002394)

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Synthesis, X-ray structure and DFT calculation of oxido-vanadium(V) complex with a tridentate Schiff base ligand

I. Sheikhshoaie, S. Y. Ebrahimipour, A. Crochet, K. M. Fromm, *Res. Chem. Intermed.* **2015**, *41*(4), 1881-1891. DOI [10.1007/s11164-013-1317-7](https://doi.org/10.1007/s11164-013-1317-7)

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S. Kracht, M. Messerer, M. Lang, S. Eckhardt, M. Lauz, B. Grobety, K. M. Fromm, B. Giese, *Angew. Chem. Int. Ed.* **2015**, *54*(10), 2912-2916. DOI: [10.1002/anie.201410618](https://doi.org/10.1002/anie.201410618)

Controlled tautomeric switching in azonaphthols tuned by substituents on the phenyl ring

L. Antonov, V. Deneva, S. Simeonov, V. Kurteva, A. Crochet, K. M. Fromm, B. Shivachev, R. Nikolova, M. Savarese, C. Adamo, *ChemPhysChem*, **2015**, *16*(3), 649-657. DOI: [10.1002/cphc.201402691](https://doi.org/10.1002/cphc.201402691)

cis-Dioxido-molybdenum(VI) complexes of tridentate ONO hydrazone Schiff base: synthesis, characterization, X-ray crystal structure, DFT calculation and catalytic activity

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4-Hydroxy-1-naphthaldehydes: proton transfer or deprotonation

Y. Manolova, V. Kurteva, L. Antonov, H. Marciniak, S. Lochbrunner, A. Crochet, K. M. Fromm, F. S. Kamounah, P. E. Hansen, *Phys. Chem. Chem. Phys.* **2015**, *17*(15), 10238-10249. DOI: [10.1039/C5CP00870K](https://doi.org/10.1039/C5CP00870K)

Toxicity and protective effects of cerium oxide nanoparticles (nanoceria) depending on their preparation method, particle size, cell type, and exposure route

J. Gagnon, K. M. Fromm, *Eur. J. Inorg. Chem.* **2015**, *27*, 4510-4517. DOI: [10.1002/ejic.201500643](https://doi.org/10.1002/ejic.201500643)

Towards cardiolite-inspired carbon monoxide releasing molecules – reactivity of d⁴, d⁵ rhenium and d⁶ manganese carbonyl complexes with isocyanide ligands

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[DOI: 10.1002/ejic.201500756](https://doi.org/10.1002/ejic.201500756)

Layer-by-layer grown scalable redox-active ruthenium-based molecular multilayer thin films for electrochemical applications and beyond

V. Kaliginedi, H. Ozawa, A. Kuzume, S. Maharajan, I. V. Pobelov, N.-H. Kwon, M. Mohos, P. Broekmann, K. M. Fromm, M.-A. Haga, T. Wandlowski, *Nanoscale* **2015**, 7(42), 17685–1769. DOI: 10.1039/c5nr04087f

Nanomaterials meet Li-ion batteries

N.-H. Kwon, J.-P. Brog, S. Maharajan, A. Crochet, K. M. Fromm, *Chimia* **2015**, 69(12), 734-736. [DOI: 10.2533/chimia.2015.734](https://doi.org/10.2533/chimia.2015.734)

Construction of polynuclear lanthanide (Ln = Dy^{III}, Tb^{III}, and Nd^{III}) cage complexes using pyridine–pyrazole-based ligands: versatile molecular topologies and SMM behavior

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Integrating silver compounds and nanoparticles into ceria nanocontainers for antimicrobial applications

J. Gagnon, M. J. D. Clift, D. Vanhecke, D. A. Kuhn, P. Weber, A. Petri-Fink, B. Rothen-Rutishauser, K. M. Fromm, *J. Mat. Chem. B* **2015**, 3(9), 1760-1768. [DOI: 10.1039/C4TB02079K](https://doi.org/10.1039/C4TB02079K)

Peer-reviewed books/monographs

“Repetitorium Allgemeine Chemie”, Katharina Fromm, Marcel Mayor, Maria Schwarz, Andreas Zuberbühler, UTB-Verlag (Orell-Füssli-Verlag AG, Zürich), **2008**, ISBN 978-3-8252-8386-5

Patents

1. A. Crochet, J.-P. Brog, K. M. Fromm: New precursors for LiCoO₂, patent filed June 28th **2010**, N°01043/10
2. K. M. Fromm, C. G. Bochet, Bacterial sensor, patent filed October 22nd, **2010**, N°EP 10 188 556.4 (granted in 2 countries)
3. K. M. Fromm, P. S. Brunetto: Antimicrobial silver complex coated surface, March 31st, **2016**, N° WO 2016046725

Invited contributions to international conferences (examples)

25.06.2013 CLINAM, Basel, “Conditional Triggered Drug Release”

07.01.2014 Gesellschaft Deutscher Chemiker, TU Dresden, "Alles Nano oder was?"

20.06.2014 Annual Meeting of the Swiss Microbiologists, Fribourg, "Combating Implant Infection with Smart Nanotechnology"

23.06.2014 CLINAM, Basel, "Nanoencapsulation of Silver-based antimicrobial drugs"

26.09.2014 Forum OFAC Basel, "Smart Materials for Medicine"

27.09.2016 Université Louis Pasteur, Strasbourg, France

12.11.2017 KAUST, Saudi-Arabia, Department Talk

13.07.2018, University of Lyon, France, Plenary speech at the French Crystallography Meeting "Mixed-metal compounds and their applications"

31.07.2018, International Conference on Coordination Compounds (ICCC-43), Sendai, Japan, Keynote Lecture, "Mixed-metal compounds and their applications"

Outreach activities

Conference Reports:

"Ada Yonath Held Inaugural Chaim Weizmann Lecture in Fribourg on March 21st, 2011", K. M. Fromm, *Chimia* 2011, 65, 616-618

"ECM-30 - European Crystallographic Meeting 2016; Bringing the Crystallographic Flame to Basel, Switzerland", K. M. Fromm, J. Schefer, *Chimia* 2016, 70, 905-906 and *IUCr Newsletter* (<https://www.iucr.org/news/newsletter/volume-24/number3/ecm30>)

Editorials:

"Coordination Polymer Chemistry", C. E. Housecroft, K. M. Fromm, *Chimia* 2013, 67, 6, 369

"International Year of Crystallography", H.-B. Bürgi, K. M. Fromm, *Chimia* 2014, 68, 1-2, 6-7

Newspaper and other Public Media Contributions (past 5 years):

03.05.2019: "Nie mehr Diskussionen mit dem Kellner!", *tagesanzeiger*, pdf

03.05.2019: "Nie mehr Diskussionen mit dem Kellner!", *der Bund*, pdf.

04.2019: "Goût de bouchon", *Le pamphlet*.

29.04.2019: "Des chercheurs inventent le détecteur de vin bouchonné", *Le point (Fr)*, pdf.

26.04.2019: "Des chercheurs suisses ont mis au point un détecteur de vin bouchonné", *Un oeil en salle*, pdf.

25.04.2019: "Des chercheurs bordelais ont mis au point un détecteur de vin bouchonné", *France Bleu*, pdf

25.04.2019: "Bientôt plus besoin de vous demander si votre vin est bouchonné, des chercheurs suisses ont mis au point un capteur permettant de le déceler", *Food&Sens*, pdf.

25.04.2019: "Détecter visuellement un vin bouchonné", *La Gruyère*

25.04.2019: "Vin bouchonné vite détecté", La liberté, pdf
24.04.2019: "Mise au point d'un détecteur de vin bouchonné", Le Vif – Weekend (Be), pdf.
24.04.2019: "Dem Zapfen auf der Spur", Bieler Tagblatt, pdf.
24.04.2019: "La science a (enfin) une solution contre le vin bouchonné", Paris Match (Be), pdf.
23.04.2019: "Des chercheurs suisses mettent au point un détecteur de vin bouchonné", Head Topics, pdf.
23.04.2019: "Des chercheurs suisses mettent au point un détecteur de vin bouchonné", RTBF, pdf.
23.04.2019: "Mise au point d'un détecteur de vin bouchonné", Arc info, pdf.
23.04.2019: "Mise au point d'un détecteur de vin bouchonné", La côte, pdf.
23.04.2019: "Mise au point d'un détecteur de vin bouchonné", Le nouvelliste, pdf.
23.04.2019: "Capteur ressent Cônes dans le Vin à – Vue", Decotidien, pdf.
23.04.2019: "Sensor spürt Zapfen-Moleküle im Wein auf", MSN Nachrichten, pdf.
23.04.2019: "Sensor erkennt Zapfen im Wein", Baueren Zeitung, pdf.
23.04.2019: "Wein: Sensor erkennt Zapfen", Schweizer Bauer, pdf.
23.04.2019: "Sensor spürt Zapfen-Moleküle im Wein auf", Swissinfo.ch, pdf
23.04.2019: "Schweizer Forscher erfinden Zapfen-Sensor für Wein", Blick, pdf
23.04.2019: "Hat der Wein Zapfen? Ein Sensor spürt die typischen Moleküle auf", NZZ, pdf
23.04.2019: "Des chercheurs fribourgeois ont mis au point un détecteur de vin bouchonné", Le temps, pdf.
23.04.2019: "Des chercheurs mettent au point un détecteur de vin bouchonné", 7sur7.be, pdf
20.04.2019: "Sensor für Nachweis von Korkgeschmack", Freiburger Nachrichten, pdf
12.04.2019: "Vorsicht, Zapfen! Sensor für Korkgeschmack im Wein entwickelt", myScience, pdf.
11.04.2019: "La science a trouvé le détecteur à goût de bouchon", 24heures, pdf
11.04.2019: "L'Uni crée un détecteur de vins bouchonnés", 20minutes.ch/ro, pdf
30.01.2019: "De l'argent en guise d'antibiotiques", La Liberté.
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Café Scientifique "Nanoparticles and Nanotechnology", 20.09.2017, Nouveau Monde, Fribourg

Radio Fribourg, « Les Experts », Nanoparticules, 14.09.2017,
<http://podcasts.radiofr.ch/8d89a7f11fe1eb43cdf9c36f106537fe.mp3>

Radio RTS, 05.08.2016 « Rencontres » : <http://www.rts.ch/la-1ere/programmes/cqfd/7842489-rencontre-avec-katharina-fromm-05-08-2016.html>

<http://www.rts.ch/la-1ere/programmes/cqfd/7337814-cqfd-du-05-01-2016.html>

https://www.rts.ch/la-1ere/programmes/cqfd/7466522-les-sens-de-la-vie-17-02-2016.html?rts_source=rss_a

<http://www.freiburger-nachrichten.ch/nachrichten-grossfreiburg/zwerge-die-nicht-zu-unterschaetzen-sind>

<http://www.freiburger-nachrichten.ch/nachrichten-kanton/naturwissenschaften-fuer-dummies>

<https://www.laliberte.ch/news/regions/grand-fribourg-sarine/quand-la-chimie-et-la-physique-se-donnent-en-spectacle-247332#.U7JzLrE19No>

<https://www.laliberte.ch/news/regions/grand-fribourg-sarine/un-show-pour-des-chimistes-en-herbe-229566#.U7JzQrE19No>

<http://www.freiburger-nachrichten.ch/nachrichten-kanton/diesmal-geht-es-um-den-kern-alles-seienden>

<http://www.freiburger-nachrichten.ch/archiv/ein-gefallener-banker-lanciert-das-jubeljahr>

<https://www.laliberte.ch/news/regions/canton/l-universite-ce-diamant-multifacette-12926#.U7JzaLE19No>

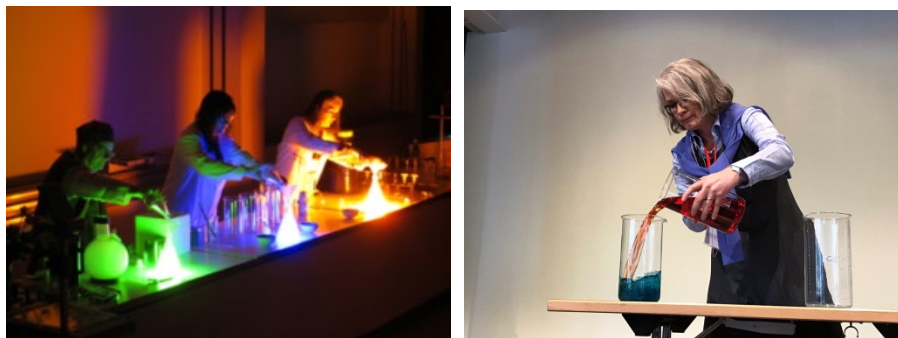
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05.06.2013, Freiburger Nachrichten « Ionen können gestapelt besser Strom leiten »

General contributions to science and society

April 2015-April 2017 & March 2018-Feb 2021: Leader of a MINT-project of the Academy of Sciences for the advancement of chemistry at all age levels

Coordinator of an Institutional Partnership with the Bulgarian Academy of Sciences, Bulgaria (since 2012), and the University of Belgrade (2012-2015) and Kagujevac (2016-2018) in Serbia.

Annual Christmas Show at the Department of Chemistry of the University of Fribourg (photo left); beneficial chemistry shows for the International Red Cross (e.g. 2010 for Haiti, 10'000 CHF)



Initiator and annual organization of the Fribourg Chaim Weizmann Lectureship (http://www.chem.unifr.ch/en/departement/chaim_weizmann/)

Contribution to the workshop “We Scientists shape Science” (photo above, right), January 2017, Academy of Sciences

Contribution of “The Alchemist” to “Science Me” at the Nuit de la Science, Geneva, 7/8th of July 2018

