



Marc Guerre

CNRS Research fellow at Softmat laboratory, University of Toulouse (France)

Position,

Location:

Homepage:

ORCID:

Education:

<https://softmat.fr/>

orcid.org/0000-0003-1410-9923

2014, Undergraduate studies at the University of Montpellier (France)

2017, PhD supervised by Bruno Améduri and Vincent Ladmiral at the National Chemistry School of Montpellier (France)

2017–2019, Postdoctoral position supervised by Filip du Prez at Ghent University (Belgium)

Research:

Organic chemistry, polymer chemistry, materials science, RAFT polymerization, dynamic covalent materials, vitrimers

Hobbies:

Chess, brewing, manga

The most rewarding aspect of being a scientist is when a fresh idea you scribbled on the corner of a piece of paper miraculously works in the lab.

My first experiment was a RAFT polymerization, so I guess I was born into the “controlled polymerization” family.

The most rewarding part of my job is seeing a student grow and evolve step by step into a confident, independent scientist, one who eventually contradicts you and proves you wrong.

The research project in my group that I am most excited about is actually the one we just published in *Angewandte Chemie* on allyl sulfide vitrimers.

The one piece of lab equipment that I could not be without is the hot press, the ultimate judge of whether your “dynamic exchanges” are actually dynamic or just pretending to be.

The most valuable feature of a good referee is the capacity to objectively assess novelty, a responsibility that appears straightforward, yet is often highly challenging in practice.

The most important thing I have learned from my students is that there is no universal way to supervise them, every day we learn and grow together (sometimes they even teach me more than I teach them!).

An essential quality of a good research atmosphere is passion, that little light that gets us out of bed and into the lab every

morning. Without it, the days become very long... and the coffee is never strong enough.

The best advice I have ever been given is to believe in myself and work hard; sooner or later, it always pays off.

If I won a million dollars in the lottery I would spoil my parents and still be doing exactly the same thing with the same people... just with upgraded coffee machines.

I get my best ideas when I sleep. Unfortunately, I rarely remember them when I wake up.

My favorite place on earth that science has taken me to is Japan, a truly magical experience that definitely changed my life.

My favorite drink is beer, because it's the happiest outcome of chemistry meeting taste.

My favorite song of music is “Comfortably Numb” by Pink Floyd, which perfectly describes how we feel after submitting a paper we've read (and re-read) 30 times.

One book that I can whole-heartedly recommend is the *Lord of the Rings* by J. R. R. Tolkien, the greatest journey ever put on paper. Because if you think your projects require perseverance, imagine walking to Mordor with a ring that wants to ruin your day.

Behind the Science

I always believed that the advances made over the past two decades in reversible-deactivation radical polymerizations (RDRP) could, in principle, be applied to dynamic covalent materials. We were greatly inspired by Prof. Bowman's pioneering work on allyl sulfide motifs as dynamic units for stress-relieving networks. With our recent insights into disulfides, exchanging predominantly through radical pathways, we asked ourselves: could disulfides reversibly generate thiyl radicals to trigger addition–fragmentation chain transfer in vitrimers? This question sparked the development of the radical-based vitrimer concept described below.

The author presented on this page has published his **first article** as a submitting corresponding author in *Angewandte Chemie*:

“Disulfide-Initiated Addition–Fragmentation Chain Transfer in Allyl Sulfide-Based Vitrimers”: A. Millan, A. Wodranski, M. Guerre, *Angew. Chem. Int. Ed.* **2025**, *64*, e202519880.

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