

11 September 2022

**Professor Dr. Hubertus Pietsch**

Head of Research

Bayer AG Pharmaceuticals Research and Development  
MR and CT Contrast Media Research Department

Building S109, Müllerstraße 178  
13353 Berlin, Germany

**Re:** PARTNERSHIP FOR EU CALL [HORIZON-EIC-2022-PATHFINDERCHALLENGES-01-01](#)

Dear Hubertus,

We are leading a collaborative multidisciplinary research project to address the EU Pathfinder call on climate challenges for nitrogen management and valorisation. Our research consortium is comprised of established academic researchers from various European universities and technology experts from around the world with a proven track record of delivering successful research projects and technology solutions. We are in a process of submitting our collaborative research proposal to this EU call due on 19 October 2022 with an expected budget of EUR 1.2 million.

Our proposed project aims to develop breakthrough materials, novel processes, and integrated technology solutions for effectively managing a variety of N-base molecules by converting them into value-added products such as net zero commodities, chemicals, fuels, and energy vectors. Our research underpins renewable energy as a primary driver for innovation in N-conversion materials and technologies by delivering the following work packages.

1. Material discovery for N-base interspecies conversion
2. Material optimisation for photocatalytic activities
3. System design, operation, and Industry 4.0 integration
4. Circular economy for sustainable process manufacturing
5. Knowledge and technology transfer to industry and academia

Our novel materials and a suite of state-of-the-art process technology solutions will address in an integrated manner: environmental, industrial, agricultural, socioeconomic, and logistic issues. We strongly believe that our research efforts will significantly advance science and its key benefits to the industry. Therefore we cordially invite you to join us in this undertaking of high societal importance. You and your team can collaborate with us in any number of the following areas.

1. Partnership in the proposed research project as an EU-funded or self-funded beneficiary
2. Voluntary in-kind assistance and/or any relevant cost-share commitments
3. Participation in the strategic planning and research development
4. Assistance with resources, scientific inputs, relevant datasets, and mentorship
5. Donation of new or used equipment, latest analytical tools, and software
6. Assistance in the promotion of research and dissemination of knowledge
7. Participation in curriculum development for internal and external audiences
8. Participation to promote transferable skills and vocational training
9. Commitment to the successful delivery of the proposed research project

We believe that the research findings of this work may offer you some of the following key benefits:

- Access to new knowledge in the area of nanotechnology
- Ability to access material products and systems technologies
- Opportunity to supervise and review the research findings
- Opportunity to network with our subject matter experts
- Opportunity to participate in prioritisation needs to advance the sector
- Ability to gain in-depth knowledge of decision-making using the Industry 4.0 Platform
- Access to on-site and online training for your current and future workforce

I look forward to further discussing this EU call of action towards establishing mutually beneficial ties with you to achieve our commonly shared objectives of research innovation for industrial success and environmental sustainability.

Yours sincerely,

Sabina

## References

- [1] Link to call: [EU EIC 2022 pathfinder challenge](#)
- [2] Link to pdf: [EU EIC 2022 pathfinder challenge guide on carbon dioxide and nitrogen](#)
- [3] Link to pdf: [EU EIC work programme](#)
- [4] Link to site: [Materich research work](#)