

Bio-based & CO₂-based Economy



Departments

- Sustainability
- Economy & Policy
- Technology & Markets
- Communication

Applied research for your needs

nova-Institute at a glance

Applied research for your needs: We offer our unique understanding to support your business

From feedstock to product, from markets to dissemination - nova-Institute links research-based consultancy to feedstocks, technology, products and markets as well as policy, economy and sustainability in all areas of the Bio-based and CO₂-based Economy. We make your business fit for the future!



Why nova-Institute?

- We offer more than two decades of experience with the use of bio-based materials and products
- You get access to nova's internal or external top experts and scientists
- Many fruitful partnerships in various national and international associations, research projects and expert groups at your command
- We offer several popular platforms for knowledge exchange and communication - a key to success for the Bio- and CO₂-based Economy
- We host some of the most successful conferences of the industry - made by experts for experts

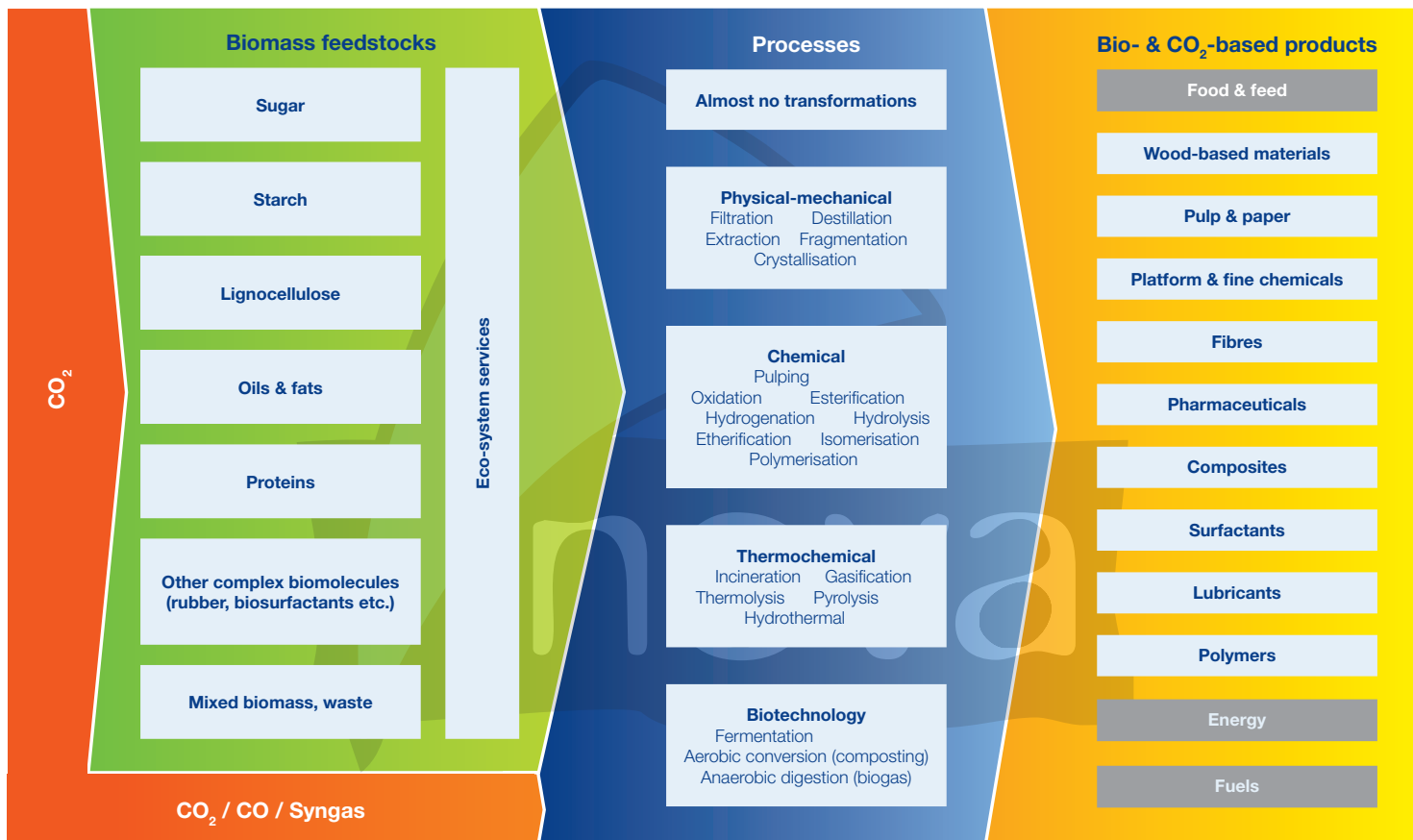
Member of

- CLIB2021
- Discover Natural Fibres Initiative (DNFI)
- European Bioplastics
- European Commission Expert Group for Bio-based Products
- European Industrial Hemp Association (EIHA)
- Federation of Reinforced Plastics (AVK)
- Industrielle Biotechnologie Bayern (IBB)
- kunststoffland NRW e.V.

Key questions informing nova activities

- What are the most promising concepts and applications for industrial biotechnology, biorefineries and bio-based or CO₂-based products for the future?
- What are future challenges, environmental benefits and successful solutions in the use of bio- and CO₂-based materials and products?

Bioeconomy & CO₂-based economy - Our expertise



Selected customers

Associations / Clusters / NGOs: AVK (DE), APAG (EU), BIC (EU), BioEconomy Cluster (DE), Birdlife (EU), CEFIC (EU), CLIB2021 (DE), EIHA (DE), EPF (EU), European Bioplastics (DE), IAR (FR), IBB (DE), VHI (DE), WWF (USA/DE)

Automotive Industry: Brose (DE), BMW (DE), Mercedes/Daimler (DE), Dräxlmaier (DE), Faurecia (DE), Ford (DE), Johnson Controls (DE), Porsche (DE), Quadrant (DE), VW (DE)

Chemistry, Plastics & Other Materials: Arizona Chemical (USA/NL), BASF (DE/CA), Colruyt (BE), Corbion (NL), CropEnergies (DE), DuPont (USA/DE), Elastopoli (FI), Eridania Sadam (IT), ESE Expert (DE), Evonik (DE), FKUR (DE), Gidetec (FI), Honeywell (USA), Hyne Timber (AU), IKEA (SE), InfraServ (DE), Kosche (DE), Leifheit (DE), Logocos (DE), Mondi (AT), Neste (FI), Neudorff (DE), Peter Greven (DE), REWE (DE), Südzucker (DE), Teijin (JP), Velux (DK)

Consulting: AFC Consulting (DE), Blezat Consulting (FR), Boston Consulting Group (DE), Clever Consult (BE), ClouPartners (DE), Deloitte (NL), E4Tech (UK), Ecorys (FR), Ernst & Young (FR/DE), KPMG (MY), meó Consulting (DE)

Engineering: Coperion, Ferrostaal, Reifenhäuser, Uhde-Inventa Fischer
Ministries & Institutions: BBI (EU), BBI-JU (EU), BfN (DE), BMBF (DE), BMELV (DE), DBU (DE), DECC (UK), DEFRA (UK), European Commission (EU), FAO (IT), FNR (DE), GIZ (DE), KfW (DE), Ministry of Economic Affairs (NL), Netherlands Enterprise Agency (NL), NIA (TH), UBA (DE)

Research Institutes: Fraunhofer UMSICHT (DE), HS Bremen (DE), IFEU (DE), INNVENTIA (SE), INRA (FR), Joint Research Centre (EU/SP), London Imperial College (UK), Öko-Institut (DE), RAPRA (UK), VTT (FI), Wageningen UR (NL), Wuppertal Institut (DE)

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nova conferences

- ▶ **International Conference on Bio-based Materials**
www.bio-based-conference.com
- ▶ **International Conference of the European Industrial Hemp Association (EIHA)**
www.eiha-conference.org
- ▶ **Conference on Carbon Dioxide as Feedstock for Fuels, Chemistry & Polymers**
www.co2-chemistry.eu
- ▶ **Biocomposites Conference Cologne**
www.biocompositesc.com
- ▶ **nova Sessions on bio-based economy**
www.bio-based.eu/nova-sessions



Current research projects

nova-Institute is a partner in various research projects within the fields of bio-based chemistry, materials and biotechnology. nova-Institute surrounds, strengthens and completes scientific and engineering work by linking it to feedstock, markets, economy and policy. Furthermore, nova is committed to do dissemination and marketing support.

Projects funded by the European Commission

- **MIRACLES** - Multi-product Integrated bioRefinery of Algae: from Carbon dioxide and Light Energy to high-value Specialties. (11/2013 - 10/2017)
- **BIO-QED** - Quod Erat Demonstrandum: Large scale demonstration for the bio-based bulk chemicals BDO and IA aiming at cost reduction and improved sustainability. (01/2014 - 12/2017)
- **COSMOS** - Camelina & crambe Oil crops as Sources for Medium-chain Oils for Specialty oleochemicals. (03/2015 - 08/2019)
- **InnProBio** - Forum for Bio-Based Innovation in Public Procurement. (03/2015 - 02/2018)
- **PULP2VALUE** - Processing Underutilised Low value sugarbeet Pulp into VALUE added products. (07/2015 - 06/2019)
- **MARISURF** - Novel marine derived biomolecules and industrial biomaterials. (09/2015 - 08/2020)
- **SUPERBIO** - Support and PartnERship for the development of multiple sustainable and market ready value chains in the BIObased economy. (06/2016 - 11/2018)
- **BioForever** - BIO-based products from FORestry via Economically Viable European Routes. (09/2016 - 08/2019)
- **STAR4BBI** - Standards and Regulations for the Bio-based Industry. (09/2016 - 08/2019)
- **Zelcor** - Zero Waste Ligno-Cellulosic Biorefineries by Integrated Lignin Valorisation. (09/2016 - 08/2020)
- **CHASSY** - Model-Based Construction and Optimisation of Versatile Chassis Yeast Strains For Production Of Valuable Lipid and Aromatic Compounds. (12/2016 - 12/2020)
- **MAGIC** - Marginal lands for Growing Industrial Crops: Turning a burden into an opportunity. (06/2017 - 05/2021)
- **ReSolve** - REnewable SOLVENTs with high performance in application and improved toxicity profile. (06/2017 - 05/2020)
- **RoadToBio** - Roadmap for the Chemical Industry in Europe towards a Bioeconomy. (06/2017 - 04/2019)
- **AFTERLIFE** - Advanced Filtration TEchnologies for the Recovery and Later conversion of relevant Fractions from wastewater. (09/2017 - 08/2021)
- **PEference** - From bio-based feedstocks via di-acids to multiple advanced bio-based material with a preference for polythylene furanoate. (09/2017 - 04/2022)

National projects

- **BEPASO** - Bioökonomie 2050: Potentiale, Zielkonflikte, Lösungsstrategien. (12/2016 - 01/2020)
- **WeRümA** - Werkstoffentwicklung auf Basis von Rübenschnitzeln für marktrelevante Anwendungen. (01/2017 - 12/2020)
- **ZeroCarb FP II** - Sustainability assessments and guidance for the Innovationsallianz ZeroCarbonFootPrint. (02/2017 - 09/2019)

Bioeconomy market reports - These reports and more are available at www.bio-based.eu/reports

Commercialisation updates on bio-based building blocks, 2017-07.

Standards and labels for bio-based products, 2017-05.

Bio-based polymers, a revolutionary change, 2017-04.

Policies impacting bio-based plastics market development and plastic bags legislation in Europe, 2017-03.

Bio-based Building Blocks and Polymers

- **Global Capacities and Trends 2016-2021**, 2017-02.

Asian markets for bio-based chemical building blocks and polymers, 2017-01.

Consumption of biodegradable and compostable plastic products in Europe, 2016-04.



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