Enzymes for Industrial Applications
(Bio-)Catalysts for Industry and Business

Platinum Sponsor:
HESSEN TRADE&INVEST
Hessen Economic Development

www.dechema.de/Enzymes
The 4th edition of “Enzymes for Industrial Applications” offers industry professionals a platform to discuss the latest developments in enzyme technology and biocatalysis. It is your chance to meet solution providers, key customers and users of enzymes and learn about new products, services and process and production technologies.

Enzymes have become an established part of industrial processes – either in the chemical, food, cosmetics or pharmaceutical industry. Innovative methods for the improvement of enzyme expression, the development of new productions strains, and bioprocess optimization decrease the costs for enzyme production. Synthetic particles, enzyme immobilization and compartmentalization enable recovery of the biocatalyst and help to improve economic viability. A deeper understanding of structure and protein-protein interaction allow a targeted engineering of enzymes that are tailored to the desired application.

Join the PRAXISforum to discuss all aspects of industrial enzymes: Enzyme design, process development, enzyme production as well as best practices from the industry.

Enzymes are part of consumer products such as detergents or cosmetics, but also play a major role in biorefinery concepts and the valorisation of biomass. Meet experts from different sectors, exchange ideas and compare lessons learned.

**Programme Comittee**

The programme committee contributes its experience and expertise from industry and academia to the programme. It is in charge of the selection and compilation of the presentations.

**Members:**
- Dr. Emil Byström, Chief Executive Officer, SpinChem AB/Sweden
- Prof. John M. Woodley, Technical University of Denmark, DTU Chemical Engineering/Denmark
- Alexander Frey, Project Manager PRAXISforum, DECHEMA e.V./Germany

**PRAXISforum Key Topics**

- Industrial applications of enzymes: Recent developments and future aspects
- Economic enzyme inhibition
- Modelling & Engineering enzymes: Customized solutions for innovative processes
- Recent advances in bioreactor engineering and scale-up
- Best practice examples and lessons learned

**What PRAXISforum is About**

- By industry, for industry – this event reveals market opportunities and promotes the development of new enzymes, production processes and application areas.
- Networking platform – we bring together international market leaders, high profile end-users and experts from all relevant industries.
- High-level speakers – best practice presentations and lessons learned from speakers at decision maker level. Technological background is presented along with information relevant to end users.
- Relevance to applications – this event provides participants with an overview of innovations for their highly specific requirements of everyday practice.
<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Speaker</th>
<th>Organization/Location</th>
</tr>
</thead>
</table>
| 14:15 | Cell-free synthetic biology for the production of functional ingredients  
• Multi-enzyme cascade reactions to make high-value products  
• In vivo versus in vitro approaches  
• Enzyme engineering as key enabling technology | Dr. Marc Struhalla  
CEO  
c-LEcta GmbH  
Leipzig/Germany |  
|
| 14:45 | Efficient and safe biocatalytic processes to oxyfunctionalised products using hydratases and biooxidations with water and oxygen as reactants  
• Enzymes are valuable biocatalysts especially because of their chemo-, regio- and enantioselectivity  
• Oxygen can be used in a safe way with organic compounds by thorough selection of reagents, solvents and reaction conditions  
• Water additions by hydratase enzymes is an under-represented but promising strategy to produce secondary and tertiary alcohols | Dr. Martin Schürmann  
Principal Scientist Biocatalysis  
InnoSyn B.V.  
Geleen/The Netherlands |  
|
| 15:15 | What can a new CRO offer to the biotech industry?  
• Digging into the repertoire of oxidoreductases and other known but forgotten enzymes  
• Experimental validation of computational predictions  
• Enzyme stabilization and improvement | Dr. Nikola Loncar  
CEO  
Gecco Biotech  
Groningen/The Netherlands |  
|
| 15:45 | Exhibitor Pitches Part II |  |  
|
| 16:00 | Coffee break, interactive networking and discussion @ “topic tables” in exhibition area |  |  
|
| 17:15 | Enzyme engineering made easier  
• A brief description of Zymvol Biomodeling  
• Computational enzyme discovery and design  
• Achievements and challenges faced in the last 2 years | Dr. Maria F. Lucas  
Managing Director  
ZYMVOL  
Barcelona/Spain |  
|
| 17:35 | Scaling of biopolymer synthesis – requirements vs. costs  
• Identification & elimination of cost drivers in upstream and downstream processes  
• Early stage process development in a vague requirements environment  
• Building block systems – an option for required flexibility or a money burner? | Dr. Konstantinos Antonopoulos  
Co-Founder & CEO  
mk2 Biotechnologies  
Munich/Germany |  
|
| 17:55 | Enzyme cascades – Industrial processes inspired by nature  
• Versatility for process development  
• Improved downstream performance  
• Reduced side products | André Pick  
CEO and Founder  
CASCAT  
Straubing/Germany |  
|
| 18:15 | Discussion @ „topic tables“ in exhibition area |  |  
|
| 19:00 | Networking Event „A night at the museum“ |  |  
|

**Tuesday, 4 February 2020**

17:35  
**Time**  
**Topic**  
**Speaker**  
**Organizations/Location**

- **Scaling of biopolymer synthesis – requirements vs. costs**  
  - Identification & elimination of cost drivers in upstream and downstream processes  
  - Early stage process development in a vague requirements environment  
  - Building block systems – an option for required flexibility or a money burner?  
  - Dr. Konstantinos Antonopoulos  
  - Co-Founder & CEO  
  - mk2 Biotechnologies  
  - Munich/Germany

- **Enzyme cascades – Industrial processes inspired by nature**  
  - Versatility for process development  
  - Improved downstream performance  
  - Reduced side products  
  - André Pick  
  - CEO and Founder  
  - CASCAT  
  - Straubing/Germany

**18:15 Discussion @ „topic tables“ in exhibition area**

**19:00**  
**Networking Event „A night at the museum“**  
**Location:**  
Senckenberg Bistro  
Senckenberganlage 25  
60325 Frankfurt/Germany
<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Speaker</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:30</td>
<td>Re-Opening of exhibition</td>
<td></td>
</tr>
<tr>
<td>09:00</td>
<td>Carrier-bound immobilized enzymes</td>
<td>Dr. Rob Schoevaart</td>
</tr>
<tr>
<td></td>
<td>• Why immobilize an enzyme?</td>
<td>Managing Director ChiralVision Leiden/The Netherlands</td>
</tr>
<tr>
<td></td>
<td>• How to immobilize an enzyme</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Immobilized enzymes in various applications</td>
<td></td>
</tr>
<tr>
<td>09:30</td>
<td>Using green chemistry efficiently</td>
<td>Dr. Elin Stridfeldt</td>
</tr>
<tr>
<td></td>
<td>• Utilising enzymes efficiently is the key challenge to enable their use</td>
<td>Lead Researcher EnginZyme Solna/Sweden</td>
</tr>
<tr>
<td></td>
<td>in industrial applications</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Efficient immobilisation of enzymes and uses them in packed bed reactors</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• The technology has been demonstrated at industrial relevant scales</td>
<td></td>
</tr>
<tr>
<td>10:00</td>
<td>Applications of immobilized enzymes in pharma, chemical and food industry</td>
<td>Dr. Alessandra Basso</td>
</tr>
<tr>
<td></td>
<td>• Key applications of immobilized enzymes in industry</td>
<td>Business Development Manager Life Sciences Purolite</td>
</tr>
<tr>
<td></td>
<td>• Applications discussed by type of reactor used, type of media used</td>
<td>Llantrisant/Great Britain</td>
</tr>
<tr>
<td></td>
<td>• More than 50 different interesting applications</td>
<td></td>
</tr>
<tr>
<td>10:30</td>
<td>Coffee break, interactive networking and discussion @ „topic tables“*</td>
<td></td>
</tr>
</tbody>
</table>

**Wednesday, 5 February 2020**

**Topic tables**

At the topic tables you may discuss specific questions, developments, challenges and their solutions with our speakers. In every networking break, you can find the experts from the prior session at an indicated topic table within the catering area. Would you like to discuss your question in a smaller group? Would you like to get deeper input on a specific fact? Do you not agree with the statement given by the speaker? Make your way to our topic tables!

**Topic table hours**

| 4 February 2020: | 13:00 – 13:30, 16:00 – 16:30 and 18:15 – 18:45 |
| 5 February 2020: | 10:30 – 11:00 and 13:15 – 13:45 |

---

**11:45** | Next generation enzyme discovery – AI based identification and optimization of enzyme candidates using 3D point-cloud Catalophores™ | Dr. Christian Gruber CEO Innophore Graz/Austria |
| 12:15 | From computer aided enzyme engineering to biocatalytic manufacturing at scale | Dr. Grzegorz Kubik Business Development Manager Enzymaster Deutschland Düsseldorf/Germany |
| 12:45 | Engineering enzyme cascades for highly efficient pharmaceutical manufacturing | Dr. Margie Borra-Garske Senior Scientist Codexis Redwood City/USA |

**13:15** | Lunch, interactive networking and discussion @ „topic tables“* in exhibition area |                                                   |
| 14:30 | End of PRAXISforum |                                                   |
Dr. Konstantinos Antonopoulos
Co-Founder & CEO
mk2 Biotechnologies
Munich/Germany

„Scaling up a production process is a technical challenge, though finding the right scale-up direction in an early-stage market might be even harder.”

Konstantinos graduated in physics in 2012. After a short stop at Siemens he started working at BMW in the environment of battery materials and cell development as technology scouting and transfer manager, where he provided a crosslink between industrial series development, start-ups and academia. In parallel, he received his PhD in chemistry. Konstantinos has co-authored 7 scientific publications and more than 15 patent applications. Today, he is a co-founder and the CEO of mk2 Biotechnologies, where he and his team enable peptides for mass applications.

Dr. Alessandra Basso
Business Development Manager Life Sciences
Purolite Ltd
Llantrisant/United Kingdom

„Exploring over 50 key applications of immobilized enzymes in the pharmaceutical, chemical and food industries with an in-depth look at the types of reactor and media used.”

Alessandra received her degree in Pharmaceutical Chemistry and Technology in 1998 and her PhD in Chemical Sciences at the University of Trieste in 2001. From 1998, Alessandra worked on enzyme immobilization and biocatalysis processing. She is the author of about 50 publications in various international journals. In 2007, she started a spin-off company offering immobilized enzymes called Sprin Technologies. In 2012, she joined Purolite to start Purolite Life Sciences with the aim to expand the enzyme immobilization technologies. She is currently the Business development manager for Purolite Life Sciences for enzyme carriers, immobilized enzymes and chromatographic products.

Dr. Christian Gruber
CEO
Innophore GmbH
Graz/Austria

„Our vision is to revolutionize the way enzymes are discovered, enabling our customers to build profitable green industrial processes for a sustainable future.”

Christian Gruber studied Biochemistry at the University of Graz, Austria, where he received his PhD in Bioorganic Chemistry and Structural Biology from Prof. Kroutil. During his studies he moved to the Royal Institute of Technology in Stockholm, Sweden. He then worked as a postdoctoral fellow at the Institute of Molecular Biosciences in Graz, Austria, before moving to the „Simulation Technology“ excellence cluster at the Institute of Technical Biochemistry at the University of Stuttgart. After his return to Graz, he worked at the Austrian Centre for Industrial Biotechnology in the field of Protein Design & Engineering at the interface between science and industry. In 2016, he founded Innophore, a biotech start-up that commercialises the Catalophore® technology. Currently Christian leads 10 people and his interests are focused on the structural, kinetic and thermodynamic properties of enzyme reactivity using computational methods, artificial intelligence and structural biology.

Dr. Margie Borra-Garske
Senior Scientist
Codexis
Redwood City/USA

„Using Codexis protein engineering technology, five enzymes were engineered towards a highly efficient cascade reaction to generate a small-molecule drug from simple building blocks. Enzymes were engineered to work on non-native substrates, with high activity, stability, and stereoselectivity, under industrially-relevant process conditions.”

Margie Borra-Garske obtained her Ph.D. in Biomolecular Chemistry at the University of Wisconsin-Madison under the direction of John Denu. She unraveled the kinetic mechanism, as well as the mode of resveratrol-mediated activation of Sir2 enzymes. As a postdoc with Ronald Raines, Margie designed and evaluated antibody-protein drug conjugates as potential cancer therapeutics. In 2008, she joined Codexis, where she now employs methods of directed evolution to create highly efficient biocatalysts for industrial processes.
**The Speakers**

**Dr. Gregor Kubik**  
Business Development Manager  
Enzymaster Deutschland GmbH  
Düsseldorf/Germany  

"Biocatalysis is the key to sustainable, environment-friendly and affordable chemical manufacturing. Not only in future, but already today."

After graduating in organic chemistry and catalysis from RWTH Aachen University in 2012, he conducted his doctorate studies in chemical biology at the University of Konstanz, using a diverse set of protein engineering tools to develop novel IVD approaches. Intrigued by the power of enzyme engineering, he decided to combine his in-depth knowledge of chemistry and protein engineering in a post-doctoral research project on the development of, new to enzymes, biocatalytic reactions with Frances Arnold, which he concluded in 2018. Then, he joined Enzymaster. Their mission is to assist chemical industries in the implementation of environment-friendly biocatalysis technology into their manufacturing.

**Dr. Nikola Loncar**  
Co-Founder & CEO  
GECCO Biotech  
Groningen/The Netherlands  

"Accumulated hands-on expertise in enzyme discovery and engineering & fast and reliable service are the main competitive advantages of GECCO Biotech."

Nikola graduated in biochemistry in 2009 and obtained his PhD in 2012 at the Faculty of Chemistry, University of Belgrade, Serbia. As post-doctoral researcher he studied redox enzymes in the group of Prof. Marco Fraaije at the University of Groningen, The Netherlands. He worked on the discovery and application of DyP-peroxidases and on the engineering of flavin-containing monoxygenases for use in the textile industry. Academic and industrial partners expressed the need for a supplier of specialty enzymes and related services which triggered the idea of starting an enzyme-based company. It took 10 years for a transition of a scientist into an entrepreneur: GECCO Biotech was born in June 2019.

**Dr. Maria Fatima Lucas**  
Managing Director  
ZYMVOL  
Barcelona/Spain  

"ZYMVOL is changing the way enzymes are engineered. Today, tailor-made enzymes are available to any industry looking for a new biocatalyst."

Maria F. Lucas, graduated in Chemistry from the University of Oporto, Portugal in 2000 where she discovered that chemistry could also be done in a computer. Then, Maria completed a Master’s degree and PhD in Computational Chemistry. There she learned how to use Quantum Chemistry to investigate enzyme mechanisms. Working as a senior researcher from 2013 to 2016 at the Barcelona Supercomputing Center, she lead a team in the development and application of new methodologies for enzyme design. Since May 2017 she is Managing Director at ZYMVOL BIOMODELING, a firm developing and applying computational methods for the discovery and design of industrial enzymes.

**André Pick**  
CEO  
CASCAT GmbH  
Straubing/Germany  

"Enzyme cascades – industrial processes with improved product quality and less downstream afford."

André Pick graduated in biology at JMU of Würzburg, having majored in molecular biology and enzyme technology. Afterwards he joined the group of Prof. Volker Sieber at the Technical University of Munich and continued his scientific education in enzyme engineering and realization of innovative enzyme cascades. Finally, this resulted in the position as a co-founder of CASCAT in the year 2014 and the lead of the business as its chief executive officer. In addition to the strategic orientation of CASCAT he is in charge of the R&D activities related to biocatalyst screening and optimization as well as route scouting for chemo-enzymatic reaction cascades.
The Speakers

Dr. Subhash Pithani
Senior Research Scientist
AstraZeneca
Gothenburg/Sweden

“Recycling of Novozyme was studied using Spin Chem® RBR technology for the preparation of a key building block. Various parameters such as type of immobilized enzyme, loading, rate of agitation, temperature and scalability were studied.”

Dr. Subhash Pithani was born in India, he received his PhD in organic chemistry from Andhra University (India) with Professor R.Venkateswarlu in 2002. To expand his skills and abilities he joined the University of Strasbourg, France as a postdoctoral fellow with Dr. Charles Mioskowski and Dr. Alain Wagner. After three years of postdoctoral research, he joined in the synthetic chemistry group in NovAlix Pharma France (2005) and Aptuit Pharma (2013) in the UK. He had moved to Sweden in 2015 and has been working as a senior research scientist at AstraZeneca. His research interests include new technologies, biocatalysis, synthetic methodologies, early scale-up and development of drug candidates.

Dr. Yamini Satyawali
R&D, Bioprocess Development
Flemish Institute for Technological Research (VITO)
Mol/Belgium

“Membrane assisted process intensification paves the way for the application of biocatalysis in industrial processes. My talk will include the examples for chiral amines, esters and oligosaccharides synthesis using membrane based approaches”

Dr. Yamini Satyawali graduated in 2009 with a PhD degree from TERI University (New Delhi). She is a recipient of international research grant by Flemish government for conducting a part of her PhD research at the Faculty of bioscience engineering, Gent University, Belgium. Currently she is a scientist and project responsible in the team separation and conversion technologies at VITO. Her specialization includes intensification of enzymatic processes in food, feed, cosmetics and pharmaceutical sectors. She is also mentoring a PhD thesis on an innovative process on chiral amine production. She is (co-) author of more than 25 scientific articles and 3 patent applications.

Dr. Rob Schoevaart
Managing Director
ChiralVision
Leiden/The Netherlands

“Finding the right enzyme takes you half the way. Designing the production process around it and applying immobilization to allow for more extreme conditions, recycling and full removal takes you all the way.”

Having a life long interest in chemistry and nature in general I started studying chemistry in 1988 and specialized in Organic Chemistry. As a side interest I came first into contact with biocatalysis doing an internship in Microbiology, all at the Nijmegen University. This turned out to be a perfect knowledge base for doing a PhD on “The application of aldolases in organic synthesis” in Delft. After four years of post-doc at the Leiden University in the group “Industrial Fermentative Chemistry” I became the VP technology at CLEA Technologies in 2002. In 2006 I co-founded ChiralVision and as the Managing Director take care of business and enzyme immobilization development and production.

Dr. Martin Schürmann
Principal Scientist Biocatalysis
InnoSyn B.V.
Geleen/The Netherlands

“Molecular oxygen and water are excellent reactants to introduce oxyfunctionalities into chemical products or oxidise them further in efficient and safe biocatalytic processes.”

• Since May 2017 Principal Scientist Biocatalysis at InnoSyn BV
• 2016-2017 Principal Scientist Biocatalysis at DSM Ahead R&D
• 2004-2015 various R&D positions at DSM Research
• 2002-2003 Marie-Curie Industrial Host Fellowship (Post-Doc) at DSM Research
• 1998-2001 PhD thesis at Institute of Biotechnology, Research Center Jülich
• 1992-1998 Biology studies at Ruhr-Universität Bochum
Dr. Marc Struhalla
CEO
c-electa
Leipzig/Germany

“In vitro multi enzyme cascades with engineered enzymes outcompete fermentation processes enabled by metabolic engineering.”

Marc Struhalla studied Biochemistry in Leipzig and prepared his PhD thesis at University of Hamburg in the area of Enzyme Engineering in 2003. Out of a post-doc position at University of Leipzig he founded c-electa in 2004 and is CEO and managing director of the company since then.

Dr. Elin Stridfeldt
Lead Researcher
EnginZyme
Solna/Sweden

“Green chemistry is a versatile tool to help address global sustainability challenges, but technology is needed to use it efficiently.”

She obtained her PhD degree in organic chemistry from Stockholm University under the supervision of Prof. Berit Olofsson. During her PhD, she developed transition metal-free arylations and vinylations using hypervalent iodine reagents. In August 2017 she started to work at EnginZyme as a researcher and her current focus has been to develop processes using immobilized lipases, mainly for use in flow chemistry applications.

Dr. Philipp Süß
Group Leader Biocatalysis and Chemical Synthesis
Enzymicals AG
Greifswald/Germany

“The smart combination of biocatalysis, classical chemistry and process engineering can bring us to new sustainable processes for future products.”

His way to Enzymicals started in 2012, where he got an internship related to his biochemistry studies in Greifswald. After the internship he was invited to prepare his diploma thesis at Enzymicals and his Ph.D. thesis also under supervision of Prof. Uwe Bornscheuer. While working on his Ph.D. thesis with the topic „recombinant pig liver esterases for the production of fine chemicals“, he got the offer for the position as group leader for biocatalysis and chemical synthesis in 2013. He is proud of what they have achieved at Enzymicals in the last years. This year Enzymicals celebrated their 10th anniversary.

Dr. Emil Byström
CEO
SpinChem
Umeå/Sweden

- 2015: CEO of SpinChem AB
- 2012: CEO of Nordic ChemQuest AB
- 2010: Product Development SpinChem®, Nordic ChemQuest AB
- 2010: PhD at Umeå University: Porous polymeric materials for chromatography: Synthesis, functionalization and characterization
Exhibition

The exhibition is an integral part of the PRAXISforum. It is a platform for the latest product and technology innovations and manufacturing processes. As a visitor, you are invited to take a really close look at every exhibit.

Please find more information about our exhibitors in their company profiles on the next pages.

The following companies are looking forward to your visit and will inform you about the latest trends and decisive advantages of their products, services and your customers.

List of Exhibitors:

- B·R·A·I·N
- Enzymaster
- Innophore
- INOFEA

- Kuhner shaker
- Purolite
- SpinChem
- TWIST BIOC

- VBU − Association of German Biotechnology Companies

Platinum Sponsor:

- HESSEN TRADE & INVEST

Booths:

- Booth #B1
- Booth #B8
- Booth #B8:
- Booth #B3
- Booth #B5
- Booth #B11
- Booth #B2
- Booth #B4
- Booth #B6&7
- Booth #B10
- Booth #B12
The Full Scope of Bio-Based Solutions

BRAIN is a pioneer of industrial biotechnology. We create innovative solutions applying a world class biotechnology portfolio to our BioArchive, a proprietary repository of natural compounds, strains and genes. Focused on delivering solutions to our customers’ application needs we deliver value from concept to commercialization and beyond.

Industry-leading BioArchive and Biotechnology Portfolio

The BRAIN Group’s proprietary BioArchive offers access to an immense variety of new biological solutions for sustainable industrial processes and ingredients. The BioArchive encompasses microorganisms, natural compounds, fractions obtained from edible plant materials, metagenomic and enzyme libraries, as well as complete metabolic paths - some even from previously uncultivable organisms. BRAIN is continuously expanding this unique, dynamic “toolbox of nature”.

Value from Concept to Commercialization

The company prioritizes the marketing of product-scalable business options in order to implement its growth strategy. These are based on the BRAIN Group’s product offering to industrial customers (B2B business) as well as on products developed together with industrial partners and subsequent license-based marketing. Tailor-made solutions developed on the basis of R&D performance payments in the context of R&D partnerships comprise a further business option. A third business option is to develop our own product candidates.

Contact

Dr. Patrick Lorenz
Senior Business Development Manager
Nutrition & Health
Phone: +49 6251 9331 82
Email: pl@brain-biotech.com

Contact

Dr. Janin Sameith
Director
Life Science & biobased Economy
Phone: +49 611 95017 8262
Email: janin.sameith@htai.de

On behalf of Hessen’s Ministry of Economics, Energy, Transport and Housing, the Hessen Trade & Invest GmbH supports the development, application and marketing of key technologies for future-oriented companies throughout Hessen.

Under the brand „Technologieland Hessen“, we offer networks, advise and information, in order to keep pace with current technological and social developments. Thereby, we map the state’s various key technologies in specialist fields, identify synergies, and support innovation. In the technology field Life Sciences & Bioeconomics, we support the transition to a biobased economy that is both economically and ecologically sustainable.
Enzymaster is a one stop solution provider for the development and commercialization of innovative and sustainable enzyme catalysis technologies. With our proprietary BioEngine® platform and long-term experience, we offer R&D services with establishment of complete technology transfer packages and manufacturing collaborations to fine chemical, pharmaceutical and other industries.

Our portfolio includes:
- Enzyme panel screening
- Smart engineering of enzymes
- Process development
- Enzyme preparation by fermentation
- Biocatalytic manufacturing

BioEngine® is our enzyme directed evolution platform, spearheaded by the integration of bioinformatics database guided design, computer protein modelling and simulations, as well as high throughput systems, thus highly efficient and reliable. The application of bioinformatics-assisted design and analysis of protein mutations leads to major time savings and higher success rates; whereas the automated and controlled laboratory procedures deliver higher accuracy and consistency of experimental results.

Innophore GmbH

Innophore uses a new and unique way to identify enzymes for existing or up-coming industrial biocatalytic processes. The Catalophore™ platform enables companies to make ground breaking discoveries with an exclusive database of 3D enzyme cavities.

The Catalophore™ platform is a digital search engine provided to industrial partners in the areas Pharmaceuticals, fine and bulk chemicals, Biotherapeutics, Food & Beverage, Cosmetic, Industry or Molecular Diagnostics. Companies benefit from the application within finding altered protein properties such as thermo- and solvent stability, substrate spectrum, selectivity and specificity. Based on spacial features of active sites of enzymes, new in-silico methods are used to identify enzyme candidates using the Catalophore™ platform, a combination of a comprehensive ready-to-use structural database of biomolecules and unique search algorithms and tailored patterns.

Compared to classic digital and manual laboratory searches, the Catalophore™ platform offers a unique, target-oriented search for alternative enzymes leading to a reduced time-to-market for products. The approach differs vastly from other offerings as it is independent of the structure, protein fold and amino acid sequence. With this platform, cost and quality of pharmaceuticals, food, chemical compounds or the way new therapies are developed can be drastically improved.

Contact:
DI Christopher Trummer, BSc.
Business Development
Phone: +43 664 245 6464
Email christopher.trummer@innophore.com

Innophore GmbH
Am Eisernen Tor 3
8010 Graz
Austria
www.innophore.com
INOFEA AG

INOFEA was created to meet a critical need of the industry: to make enzymes more stable, re-usable and suitable for continuous processes.

We immobilize enzymes and protect them with a tailor-made shield making them easy to use in biocatalysis, bioanalysis, proteomics and as an active ingredient. Our customers are among the top players in their industry, namely Pharma, Food & Feed, Specialty Chemicals and Consumer Care. There are a few ways to immobilize enzymes, however, not many to protect enzymes against a harsh environment.

INOFEA developed a protective layer for fragile enzymes, which increases their robustness while maintaining their activity. In industrial processes, enzymes often degrade quickly and lose much of their power due to process conditions such as temperature, acidity, etc. This forces customers to buy more enzymes and other raw materials, to generate more waste and to incur higher labour costs. These stability and robustness issues are a severe productivity problem for various industries. INOFEA has found an excellent solution to solve these challenges.

Purolite

Purolite Life Sciences brings Purolite’s innovative thinking and distinguished history of resin technology expertise to the global Life Sciences marketplace. Over three decades, Purolite has grown into the world’s premier resin technology manufacturer and innovation leader, with production plants and advanced research labs across the globe.

Purolite Life Sciences provides APIs, enzyme carriers and immobilized enzymes, and resins for purification and separation to support research and development, and production-scale applications in pharmaceuticals, protein purification, food production, bioprocessing, fine chemical and additional markets. With a team of world-class researchers and scientists, we develop novel, high-demand and customized products to meet customer needs.
Twist Bioscience

At Twist Bioscience, we work in service of customers who are changing the world for the better. In fields such as medicine, agriculture, industrial chemicals and data storage, by using our synthetic DNA tools, our customers are developing ways to better lives and improve the sustainability of the planet. The faster our customers succeed, the better for all of us, and Twist Bioscience is uniquely positioned to help accelerate their efforts.

Our innovative silicon-based DNA Synthesis Platform provides precision at a scale that is otherwise unavailable to our customers. Our platform technologies overcome inefficiencies and enable cost-effective, rapid, precise, high-throughput synthesis and sequencing, providing both the quality and quantity of the tools they need to rapidly realize the opportunity ahead.

For more information about our products and services, please visit www.twistbioscience.com. Twist Bioscience is on Twitter. Sign up to follow our Twitter feed @TwistBioscience at https://twitter.com/TwistBioscience.

SpinChem

The generic design of the SpinChem® RBR allows for seamless scalability, whereby the technology can be utilized with liquid volumes from 10 mL up to several thousand cubic meters. Where required, customer specific features can be incorporated and SpinChem® can offer help with process development, all the way from bench-top screening to full-scale production.

SpinChem® AB is a technology company working at the boundaries of physics, chemistry and biotechnology whose products have applications in biotransformation, downstream processing, cleantech and food & ingredients.

Through the development of the rotating bed reactor (RBR), SpinChem® is able to provide dramatic improvements in the mass transfer characteristics of heterogeneous reactions involving a solid and a liquid phase.

The SpinChem® RBR is a revolutionary concept that moves solutions through a packed bed of solid phase material in a manner that maximizes contact between the liquids and the solid phase particles, while still preserving the integrity and structure of the materials. SpinChem® AB is a privately held company based in Umeå, Sweden whose clients include several of the largest companies working with fine chemicals, pharmaceuticals (biotransformation) and industrial wastewater clean-up (cleantech).

SpinChem AB
Tvistevägen 48C
90736 Umeå
Sweden
Phone: +46 90 19 25 01
www.spinchem.com

Contact:
Dr. Emil Byström
CEO
Phone: +46 706 892 501
Email: emil@spinchem.com

SpinChem® AB
Twist Bioscience
681 Gateway Blvd
94080 San Francisco
United States
www.twistbioscience.com

Contact:
Dr. Kai Seehaus
Sales Manager Germany
Phone: +46 76 603 7474
Email: kseehaus@twistbioscience.com
ZYMVOL

ZYMVOL BIOMODELING SL is a biotech company based in Barcelona, Spain specialized in the design, development and application of molecular modeling software to enzyme discovery and optimization. Founded in 2017 by the 3 cofounders and still privately owned, the company now counts with a multidisciplinary team of 14 members and accomplished a successful track record. Today we serve customers from 10 countries worldwide and have run more than 20 industrial projects successfully.

Contact:
Dr. Maria Fatima Lucas
CEO
Phone: +34 938 587 644
Email: flucas@zymvol.com

Zymvol Biomodelling SL
C/ Roc Boronat, 117
08018 Barcelona
Spain
www.zymvol.com

VBU − Association of German Biotechnology Companies

The Association of German Biotechnology Companies (Vereinigung Deutscher Biotechnologie-Unternehmen, VBU) is a federation of companies and institutions active in the fields of biotechnology and related sectors, such as pharmaceutical technology, diagnostics, laboratory technology, plant engineering and bioprocessing. As the active interface between companies, scientific research institutions and networks and as a platform for cooperation, communication and information, the VBU actively promotes technology transfer since 1996.

What we do
- Supporting knowledge and technology transfer
- Arranging contacts and initiating cooperation between industry and academic research (national and international)
- Advising companies on financing options
- Supporting members in R&D projects
- Organising conferences, trainings, workshops, partnering events and webinars

Network and Dialogue
As a part of DECHEMA, the VBU offers its 200 member companies an interdisciplinary network consisting of more than 5800 experts from the academic and industrial community. For over 20 years, the VBU has been creating an environment in which knowledge and information can easily be exchanged and new, innovative ideas can jointly be developed.

Technology Transfer
The VBU actively promotes technology transfer by providing its members with relevant information, organising training events and advising companies in the field of research funding.

Furthermore, in cooperation with DECHHEMA, the federation supports its member companies in the initiation and implementation of R&D projects. In addition to project management and coordination activities, the VBU also performs duties within projects, such as the preparation of technology and market analyses.

Contact:
Dr. Sebastian Hiessl
Biotechnology Research and Project Coordination
Phone: +49 69 7564 301
Email: sebastian.hiessl@dechema.de

VBU − Association of German Biotechnology Companies
Theodor-Heuss-Allee 25
60486 Frankfurt/Main
Germany
www.v-b-u.org
List of participants

Rübberdt, PhD Kathrin
DECHEMA e.V.
Head of Biotechnology & Communications
Frankfurt, Germany

Sameith, PhD Janin
Hessen Trade & Invest GmbH
Technologie & Innovation
Wiesbaden, Germany

Satyawali, PhD Yamin
Flemish Institute for Technological Research (VITO)
R&D, Bioprocess development
Mol, Belgium

Scheeren, Christoph
Pfeifer & Langen GmbH & Co. KG
Elsdorf, Germany

Schmidt, PhD Marlen
Gene-Ni Genetik Engineering Heidelberg GmbH
Heidelberg, Germany

Schoevaart, PhD Rob
ChiralVision BV
Managing Director
Den Hoon, Netherlands

Schönaue, David
SeSaM-Biotech GmbH
Aachen, Germany

Schückel, PhD Julia
GlycoSpot
R&D
Copenhagen-Soborg, Denmark

Schürmann, PhD Martin
InnoSyn B.V.
Principal Scientist Biocatalysis
Geleen, Netherlands

Seehaus, PhD Kai
Twist Bioscience
Business Development
Kelkheim, Germany

Shin, PhD Yong Chul
Amiogen, Inc.
Republic of Korea

Stridfeldt, PhD Elin
EnginZyme AB
Lead Researcher
Solna, Sweden

Struhal, PhD Marc
c-LEcta GmbH
Leipzig, Germany

Süss, PhD Philipp
Enzymicals AG
Group Leader Biocatalysis and Chemical Synthesis
Greifswald, Germany

Thompson, PhD Mark
Unilever
Bebington, United Kingdom

Thorne, PhD Chris
Twist Bioscience
San Francisco, United States

Timm, PhD Anne
INOTEA AG
Muntenz, Switzerland

Timm, PhD Christopher
Industrielle Biotechnologie Bayern Netzwerk GmbH
Munich, Germany

Trummer, Christopher
Innophore GmbH
Business Development
Graz, Austria

Wiltfang, Matthias
BlueSens gas sensor GmbH
Herten, Germany

Yun, PhD Young Sung
Amiogen
Chief Researcher
Jinju, Korea, Republic of

Participant list as of 27 January 2020.
Please use the data provided exclusively for contacting other participants of the event to establish an exchange of experience and information. Any commercial use of the data and in particular its disclosure to third parties is strictly prohibited.

Our next PRAXISforum events

29 – 30 Apr 2020 Lab of the Future
17 – 18 June 2020 Additive Manufacturing
7 – 8 Oct 2020 Brandschutz in der chemischen Industrie (in German language)
9 – 10 Nov 2020 Electrolysis in the Process Industry

Please check our website for more information: https://dechema.de/praxisforum
Do you need WIFI?

Networks: Max-Buchner-Foyer
or
DECHHEMA e.V.

Password: DECHHEMA14

Any questions?
Please contact:

Chereén Semrau
Tel.: +49 (0) 69/7564-651
Fax: +49 (0) 69/7564-176
E-Mail: chereen.semrau@dechema.de

Organizer:

DECHEMA e. V.
Theodor-Heuss-Allee 25
60486 Frankfurt am Main
Tel.: +49 (0) 69 7564-0
Fax: +49 (0) 69 7564-176
E-Mail: info@dechema.de
www.dechema.de