

# ITA Reinforced! Network



**RWTH**AACHEN  
UNIVERSITY



**Aachen Reinforced!**

Glass & Carbon Fibres

*Rethinking the Production of  
Fibre-based Composites.*

## Our Mission

The ITA Group is a leading research and qualification service provider with 450 employees in the areas of fibre-based high-performance materials, textile semi-finished products and their manufacturing processes.

For more than a decade, the ITA Reinforced! Symposium in Aachen has been the global meeting point of the carbon and glassfibre industries.

ITA Technologietransfer GmbH is the partner of the industry in research and development with a focus on man-made fibres, textile machinery, fibre-reinforced composites, biohybrid & medical textiles as well as technology transfer to other industries.

ITA's lead topics are oriented towards the social megatrends of sustainability and digitalisation. They address the application fields of mobility, health, energy, construction and information as well as communication.

With the know-how of industry scale processes, ITA offers comprehensive problem solutions along the entire textile value chain and provides transfer support.

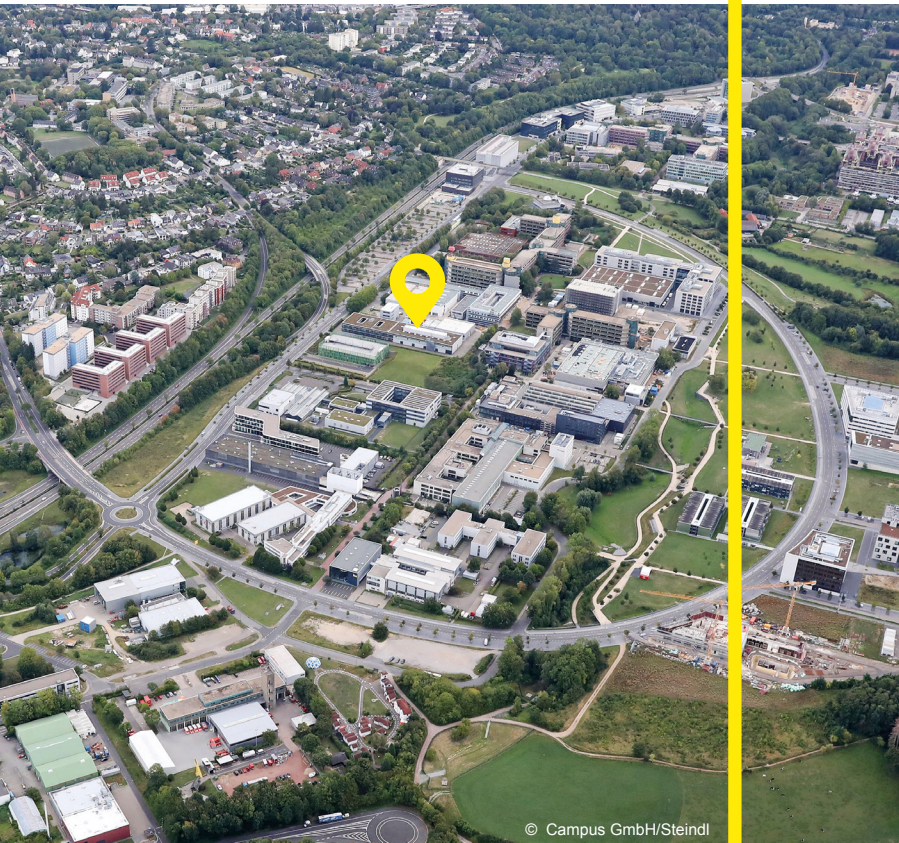
The ITA Reinforced! Network provides you with various pre-competitive services and networking opportunities. Enjoy reading!



Prof. Thomas Gries  
[www.ita.rwth-aachen.de](http://www.ita.rwth-aachen.de)



ITA at RWTH Aachen Campus.



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## Our Background.

The Institute for Textile Technology of RWTH University is located in the centre of the RWTH Aachen Campus. ITA has access to several other institutes of RWTH Aachen University, dealing with the research topic of reinforced textiles in several applications. With its own company, ITA GmbH, common projects with industrial partners are managed in an easy way. ITA GmbH and their entities are industry-related and focused on relevant key topics of the society. The entity ITA Academy GmbH places a focus on digitalisation and Industry 4.0. ITA Augsburg gGmbH acts very closely together with industrial partners in the field of recycled carbon-fibre materials and nonwovens.

## Your Benefits.

Among the ITA Reinforced! Network, you will get to know many interesting people and companies in the field of reinforcing textiles and you can expand your network. In addition, other participants get to know you and your work, which spreads your brand further. By working on joint projects with other participants, you will reduce the cost of obtaining new research results that will help your company move forward. For the implementation of the projects, ITA's machinery and laboratories are at your disposal. In addition, we support you with well-trained specialists and committed students. Technical innovations result from the projects, of which your company can benefit.

## Our Services.

The ITA Reinforced! Network offers you the following services:

- **Regular networking and project meetings**
- **Generation of joint partner projects**
- **Acquisition of large publicly funded projects**
- **Access to young talents from RWTH Aachen University**
- **Training and education for your own employees**
- **Access to ITA's large machine parks and laboratories**
- **Aachen Reinforced! glass, carbon-fibre and composite symposium**
- **Joint trade-show participation**





*From the Fibre to  
the finished Part.*

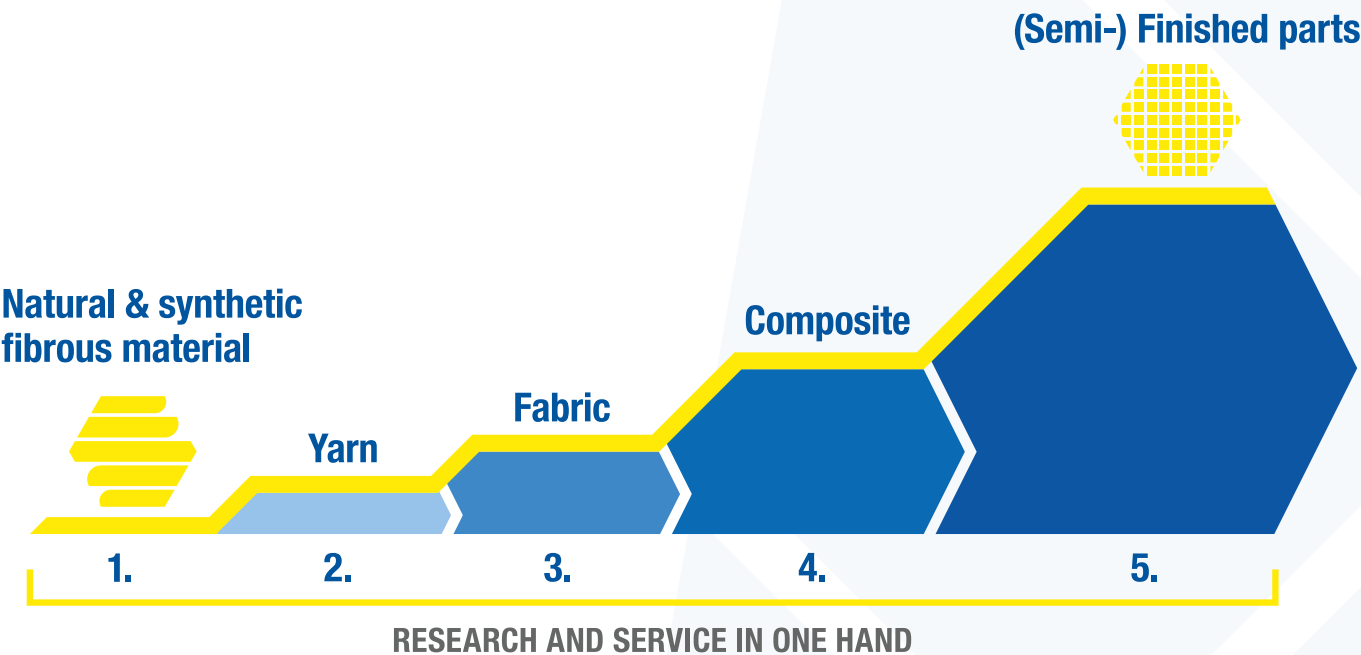
## Our Topics.

The ITA Reinforced! Network focuses on relevant topics and necessary needs of the reinforcement community. Starting from the fibre, regardless of whether it is natural fibre or synthetic fibre, we focus on the entire textile value chain. That means creating tapes and hybrid yarns, making textile products like biaxial warp-knitted structures, having the production process in mind with the factory of the future. Sustainability issues are addressed with recycling concepts and eco-friendly materials and processes. ITA has summarised these topics within activities in six work groups:

1. Hybrid Yarns
2. Tapes
3. Textile Structures
4. Natural Fibre Composites
5. Factory of the Future
6. Sustainability

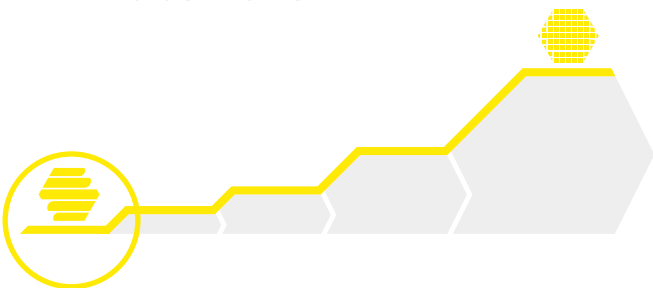


# ITA Competence along the Textile Composite Value Chain



ITA Competence along the Textile Composite Value Chain

## 1. Natural & Synthetic Materials

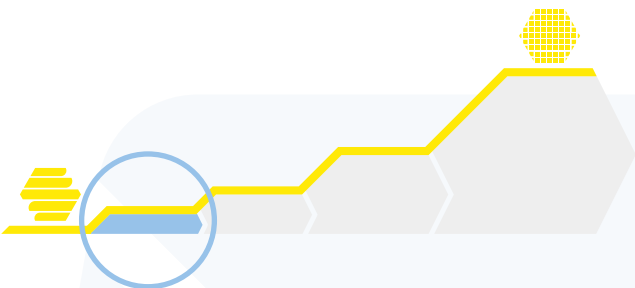


Carbon Fibre Production at ITA  
(low and high temperature ovens)

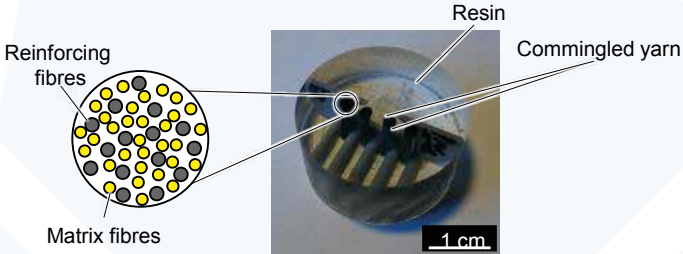


Carbon Fibre Roving

## 2. Yarns

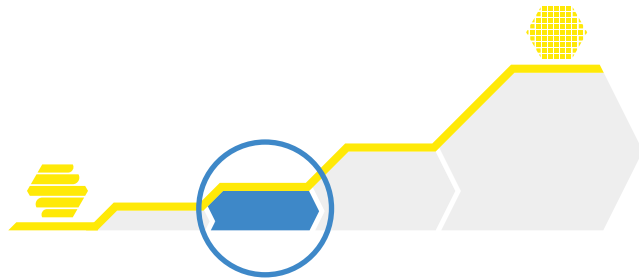


Mixing of Reinforcement Fibres  
and TP-matrix-fibres at ITA



Commingle Yarn (embedded coupon)

### 3. Fabrics

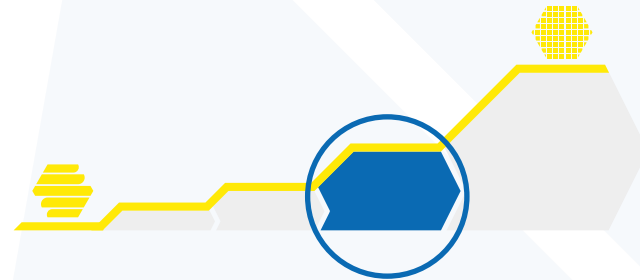


Tailored Non-Crimp Fabric



Warp-knitting facility at ITA

### 4. Composites

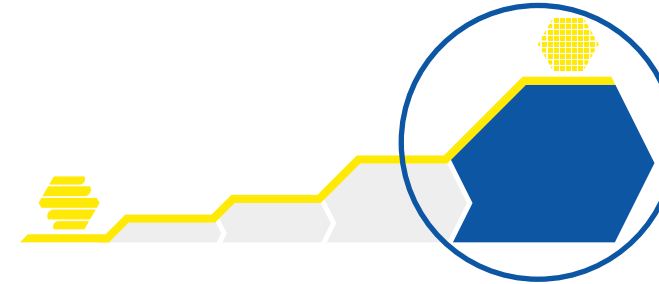


Thermoplastic CF-tape



Coating at ITA (thermoset and thermoplastic)

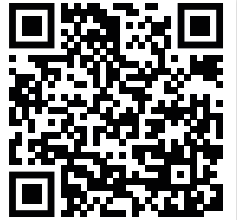
### 5. (Semi-) Finished Parts



BEV Battery Casing



Autoclave at ITA



## ITA Competence.

Our expertise ranges from the fibre production to the manufacturing of textile-based composite structures. We begin with producing reinforcing fibres, using our carbon-fibre production facility and our glass fibre spinning line. Industrial scale textile machinery enables us to produce reinforcing fabrics with technologies like weaving, bi- and multi-axial warp-knitting, braiding, winding, tailored fibre placement, and production of unidirectional tapes. The production of textile-based composite materials, such as carbon-fibre tape, prototype structures and test-samples from all kinds of textile-based material configurations complete the picture.



## Frequent Networking & Project Meetings.

- ITA Reinforced! Network Meeting once a year in the summer
- Six Innovation Days, three in spring and three in fall
- Two workgroups will be presented during each Innovation Day
- Aachen Reinforced! Glass & Carbon-Fibre Symposium
- Various match-making and networking opportunities on bilateral and Joint Partner Projects
- Showcase of innovations to partners

### Network Benefits

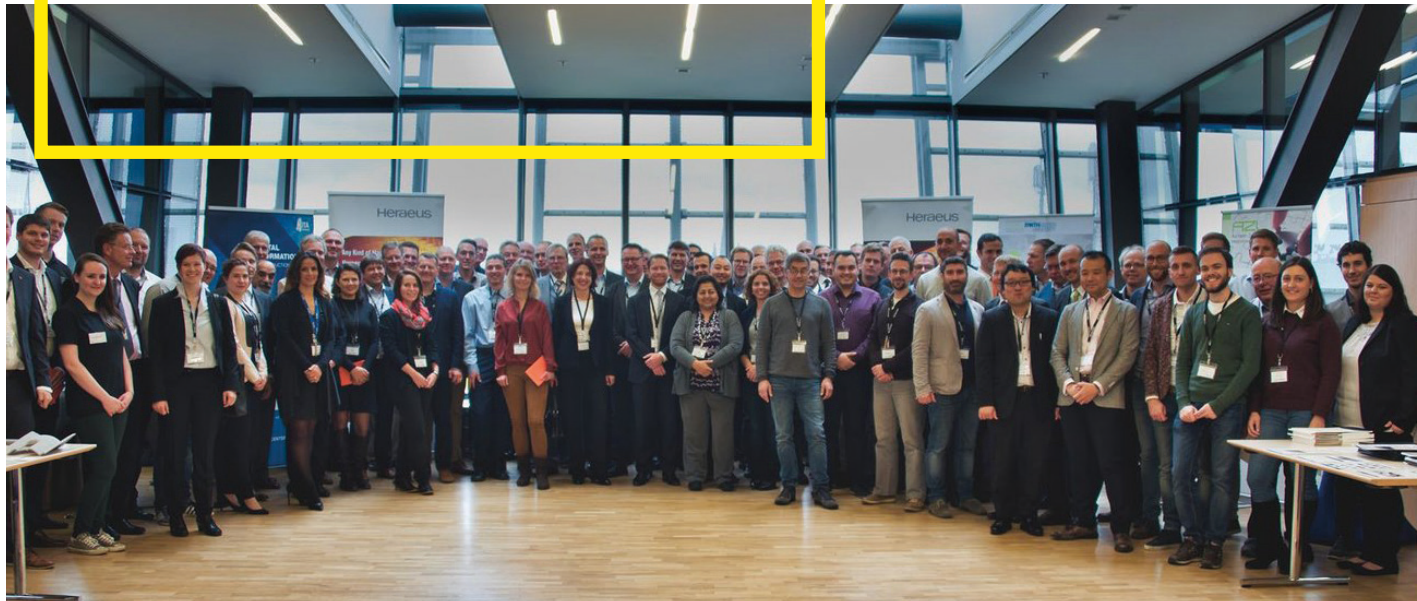
- ▶ **Marketing and Business Development.**
- ▶ **Presentation of innovations to partners.**
- ▶ **Access to latest technology & innovation.**
- ▶ **Cost-sharing in Joint Partner Projects.**
- ▶ **Network discount for the symposium.**

## Acquisition of Funding.

- More than 80 granted projects per year
- Professional Project Management
- EU Horizon Europe
- Federal Funding (BMBF, BMWi,...)
- DFG (Deutsche Forschungsgemeinschaft)
- INTERREG / Cross-border
- International: North America, South Korea, Turkey, Japan, EU

### Network Benefits

- ▶ **Technology & innovation scouting.**
- ▶ **Identification of project partners.**
- ▶ **Project definition & proposal guidance.**
- ▶ **Easy access to funding programs.**





## Access to the ITA Machine Parks & Laboratories.

- Machine Parks: ITA & DCC Aachen, ITA Augsburg
- >250 machines: From lab-scale to industrial scale
- Rent-a-day concept
- Carbon-fibre and glass-fibre pilot plants
- Complete value chain – from the fibre to the component
- Prototyping and demonstrator fabrication
- Scale-up for industrial production
- Laboratories: Polymer, Textile, Composite
- Fully equipped with state-of-the-art testing machines

### Network Benefits

- ▶ Quick trials, validated results.
- ▶ Qualified benchmarking of production setups.
- ▶ Evaluation of alternatives for decision making.







## Joint Partner Projects.

- Generation of private & confidential intellectual property
- Fast initiation and response
- Topics generated by industrial partners
- Non-bureaucratic, fast, reliable results
- Joint Partner Project example: CoSiMo
- Industrial Research Group examples: „Polymer Recycling“ & “Meltspinning“

### Network Benefits

- ▶ Exclusive research.
- ▶ Cost sharing of project results.
- ▶ Cost sharing of market intelligence.
- ▶ Networking in your community.

**Partners** Faurecia, ESI Group, Siebenwurst Modellbau & Formenbau, Netzsch, IBA AG, KUKA, Premium Aero-tec, SGL Carbon, KraussMaffei Technologies

## Access to Talent Pool.

- Interdisciplinary studies at RWTH Aachen University with its currently 47 000 students
- There are around 600 students per year at ITA
- Bachelor and Master students from engineering and other disciplines
- Supervision of external Bachelor and Master theses, PhD studies
- Internships with industrial partners

### Network Benefits

- ▶ Human Resources.
- ▶ Job & CV-Board for future employees.
- ▶ Company promotion.



## Education & Training.

- Training courses along the textile value chain - tailored to your needs
- Choose between our customised seminars, open basic training courses and personal innovation consultancy
- Training programs are supervised by highly qualified textile engineers and scientists

### Network Benefits

- ▶ Bespoke training and education.
- ▶ Hands-on showcases & demonstrations.
- ▶ Network discount.



# Membership Fees.

- The ITA Reinforced! Network fee is based on company size including
- ITA Reinforced! Network meeting once a year
  - Six Innovation Days
  - Initial consultancy for new projects
  - Network contract for two years
  - Network discount for symposium and trainings
  - and many further benefits



## Your Personal Support for ITA Reinforced! Network Members



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Company Size			Annual Contribution (in Euros)*
Micro	< 10	employees	2.000 €
Small	< 50	employees	3.500 €
SME	< 250	employees	5.000 €
Large	> 250	employees	7.000 €

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