

## Your benefit

- **Real industry expertise.** We have a proven track-record of modeling along the entire value chain from ideation and discovery over R&D to production and operations.
- **Business focus.** We have a strong sense for value and know how to create a positive business case for you.
- **Independent and open-minded.** We don't get stuck with just modeling. If it is not suitable to reach your objectives, we find alternatives.
- **In-house laboratory.** Through verification, validation, and uncertainty quantification we provide the appropriate confidence level for your application.
- **Superior integration.** We create the necessary momentum to capitalize on the value of modeling by proper integration in your organization.
- **Scalability.** We are backed by SGL Carbon as a major player and have scalable resources to adapt to ambitious project schedules and ensure quick response times.
- **SGL Carbon quality and reliability.** We provide globally trusted SGL Carbon quality and will be around in the future.

## Contact

### Central Innovation

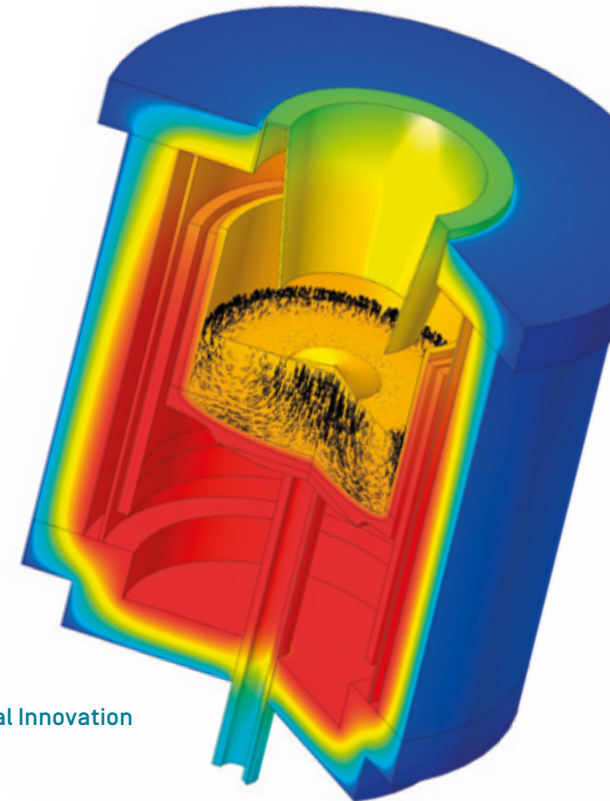
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**Just get in touch.  
We will be happy to speak with you.**



# CAE Services – Modeling and Simulation



Central Innovation



## At a glance

- Cutting edge computational methods
- 10+ years of industry experience
- Scalable HPC resources
- Experimental validation

# Our modeling expertise strengthens your business

## Industry know-how and reliability

Through our unique position within the Central Innovation division at SGL Carbon, we can draw from an unparalleled portfolio of modeling and optimization expertise along with direct access to world-class laboratory facilities.

### Our offer

- Modeling and simulation services
- Experimental validation in our inhouse SGL laboratory
- Consultancy and trouble-shooting
- Virtual prototypes and process chains
- Customized apps and tools

### Outstanding multiphysics specialist know-how

- Process optimization
- Microstructure and complex material models
- Structural mechanics
- Fluid dynamics
- Thermodynamics and heat transfer
- Thermomechanics
- Electrochemistry
- Phase transitions and reaction kinetics

### Benefit from our broad experience with different materials and manufacturing processes

- Carbon-based materials, ceramics, and glasses
- Metals, semiconductors, and polymers
- Fibers, composites, and lightweight materials

### We have experience with applications and processes in diverse markets

- Chemicals and processing
- Ceramics industry
- Steel and aluminum production and processing
- Transportation and energy
- Aerospace and automotive
- Electronics and semiconductors production
- Architecture and construction
- Additive manufacturing

Multiphysics furnace process model for optimizing temperature recipes

