

HandsOn-Website Kniffelix.de

German website that translates partially when used on devices with foreign IP addresses



Solve tricky everyday puzzles!

Topics for Beginners (Ages 8 - 99+):

<p>PIZZA yeast, enzymes, biocatalysis</p>	<p>SOIL types of soil, water retention</p>	<p>AIRPLANES center of gravity & flight behavior</p>
<p>KETCHUP flow behavior, Non-Newtonian fluids</p>	<p>HELICOPTERS 2D and 3D drawing, spatial drawing skills</p>	<p>WINGS aerodynamic drag, airflows & currents</p>

More Advanced Topics (ages 14 - 99+):

<p>AEROGELS the lightest solids in the world (funded by BMBF)</p>	<p>CHROMATOGRAPHY & HPLC basic to advanced (funded by Merck)</p>
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Project Partners

- Kniffelix is a product of KinderForscher at the TUHH. We are financed by project orders, cooperations, prize money, donations, sponsoring and supporters
- If you are interested in a possible cooperation or want to support the project, feel free to contact us!

Sponsors of individual topics:

Aerogels



Chromatography



Beginner Topics



Award 2022:



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RESEARCH FOR SOCIETY



www.kniffelix.de

FOR ALL FROM 8 - 99+ YEARS



TUHH
Hamburg
University of
Technology

How Research is Presented

- From everyday life to research & STEM-careers
- With experiments from everyday material
- Digitally accompanied
- Do it anywhere



Topic Structure:

- RELEVANCE**
 - How am I familiar with the topic? (Relevance to everyday life)
- KNOWLEDGE**
 - What is being researched?
 - Explanation of science
- APPLICATIONS**
 - Why are they relevant?
 - How will they change my life?
- PROFESSIONS**
 - Apprenticeships / Studies / Careers
 - Interviews with employees

For Whom? (depending on topic)

- Individuals from 8 - 99+ years old
- Pupils for at home or in school
- School classes, learning groups & clubs: Get your own everyday material or, in Hamburg, rent experiment material boxes from www.kinderforscher.de
- Students, interns, new department members or cooperation partners

Example: Pizza & Enzymes



From yeast dough to experiments:

Introductory videos & kitchen experiments



Quizzes, explanations & insight:

Including interviews with members of the TUHH Institute of Technical Biocatalysis www.technical-biocatalysis.com

Advanced material on enzymes:

- Additional quantitative yeast test series on enzyme and substrate concentration, temperature influence, different types of sugars or solvents, and comparison of fresh or dry yeast
- Temperature optimum, ecological potency, enzymes as biocatalysts, reaction rate rule and Michaelis-Menten kinetics

Example: Aerogels

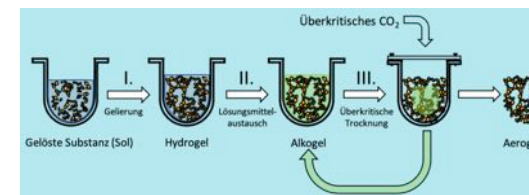


What are aerogels?

The lightest solids in the world: highly porous

Photos, quizzes & interactive videos

How are aerogels produced?



Applications, interviews & careers:



Research at the TUHH Institute of Thermal Separation Processes www.tuhh.de/v8/