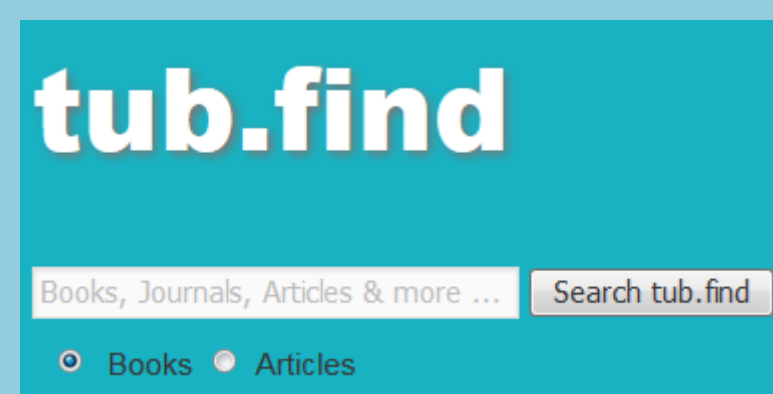
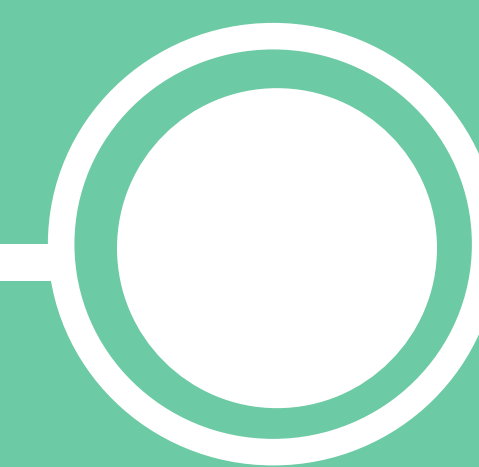
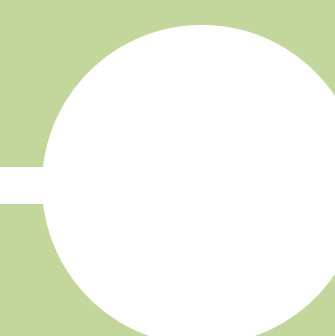
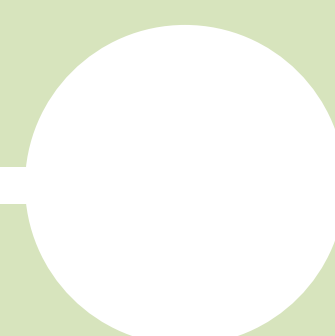
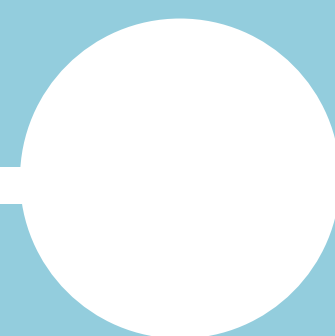
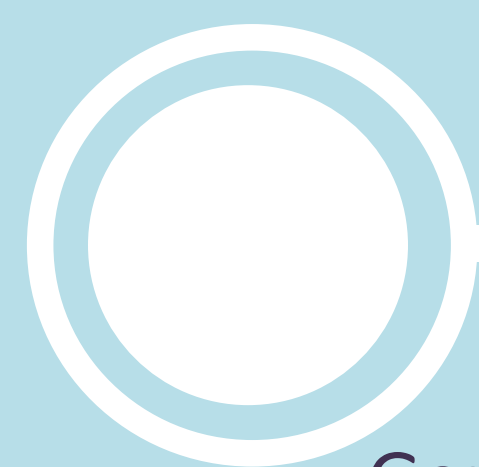




# PROCESS ENGINEERING INFORMATION @ TUHH



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General & Background Information

Practical & Useful Data

Detailed, Original Research

## Encyclopedias Dictionaries

Ullmann's Encyclopedia of Industrial Chemistry  
Online within TUHH-Intranet (2017 ed.)

Comprehensive biotechnology  
(6 Vol., 2. ed., 2011) Online within TUHH intranet

Comprehensive Renewable Energy  
(2013, 8 vols) Online within TUHH intranet

Printed sources in the reading rooms

e.g. Encyclopedia of industrial biotechnology, bioprocess, bioseparation, and cell technology (2010, 7 vols), Kirk-Othmer Encyclopedia of Chemical Technology (5. ed., 2004-2007)

## Reference Texts Books



Reading room areas:

CH Chemistry, VT Process Engineering,  
BT Biotechnology, US Environmental Engineering,  
GTF Harzardous Materilas, WK Materials Sciences

E-Books online within TUHH intranet

Selected from publishers like Springer, Wiley,  
Elsevier (ScienceDirect), Hanser, De Gruyter etc.

## Safety Information Regulations Standards

Merkblätter Gefährliche Arbeitsstoffe  
Data on harzardous substances with safety instructions and data sheets containing operational guidelines and hints to laws (e.g. EU) as well as to compulsory and advisory critical levels in the area of hazardous materials  
<http://tinyurl.com/merkblaetter>

umwelt-online.de

Texts of German laws, regulations and rules concerning health and safety, hazardous substances and further environmental protection issues.

German DIN Standards

Standards database Perinorm offers full texts of German standards (DIN, VDI)

All above only within TUHH intranet!

## Substance Property Data

ChemSpider

ChemSpider extracts a wide range of information about chemicals and materials by crawling the Internet. The *Spectra* heading may contain a wide range of spectra: IR, HNMR, C13 NMR, UV-Vis, electron impact, and mass spectra. As an open source database, scientists throughout the world can upload additional spectra. The *Data Sources* heading provides a rich set of physical, biological, metabolic, toxicology, environmental data in addition to spectral and more safety data. The *Properties* heading provides basic property and safety information. ChemSpider can be searched by names, substructures, CAS registry numbers, and InChI identifiers.

Aldrich Handbook

Free site by the chemical/biological company Sigma-Aldrich, providing spectral data and other useful information for a wide range of compounds.

CRC Handbook of Chemistry & Physics

This classic handbook contains hundreds of tables of critically evaluated data. The handbook is revised annually. Coverage includes analytical chemistry, astronomy, atomic and molecular physics, biochemistry, constants and units, electrochemistry, isotopes, fluid properties, geophysics, health and safety information, materials properties, nuclear and particle physics, polymer properties, and thermochemistry.  
@TUHH printed version only.

NIST Chemistry WebBook

This database contains high quality, critically reviewed data compiled by the National Institute of Standards and Technology (NIST). Up to 45 thermochemical, thermophysical, and ion energetics properties are available for over 40,000 compounds. Included is reaction thermochemistry data and a variety of spectra, when available. The database is predominantly organic with a few small inorganic compounds.

Further printed sources

<https://www.tuhh.de/en/find/substance-property-data/>

## Journal Articles Patents

Web of Science with Science Citation Index

This database indexes leading science and technology journals as well as journals from social sciences and humanities. It features cited reference searching, which allows users to discover who has cited a particular article or author. Coverage goes back to 1945.

TEMA® Technology and Management

This database contains references with abstracts, keywords and descriptors on technology and management. It provides information from German and international scientific and practical technical literature like journals, conference proceedings, reports, dissertations, as well as non-conventional literature. Coverage goes back to 1968.

PubChem

Database created by US National Institutes of Health (NIH) to provide information about small organic molecules.

SciFinder

This resource is the online version of Chemical Abstracts from the American Chemical Society (ACS), which indexes chemical research reported in journal articles, patents, symposia, conference proceedings, dissertations, technical reports, and new books. Coverage goes back to 1907.  
Not available @ TUHH

Patents

About 60 % of the information in patents is not published elsewhere. DEPATISnet - the German patent information system, esp@cenet - European Patent Office, US Patent and Trademark Office  
<https://www.tuhh.de/en/patents/>



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<https://www.tub.tuhh.de/en/process-and-chemical-engineering/>

Adopted from: Crystal Boyce. "Chemistry Lab Poster" Chemistry (2016)

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