



## Resumé Dr. Claudia Arnold



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Date of birth 25. Nov. 1965

Course of studies: Oct. 1984 – May 1990:  
study of chemistry at the  
University of Hannover

Dissertation: May 1990 – Dec. 1990:  
dissertation in polymer chemistry at the University  
of Hannover

Doctorate: Oct. 1991 – Oct. 1994:  
thesis work in the process development laboratories  
of Pfizer (Illertissen)

Viva: Dec. 1995, University of Ulm

## Work Experience

- Apr. 1991 – Sep. 1991:
- Seus Systemtechnik GmbH & Co. KG,  
Wilhelmshaven:
- development of several recycling procedures for plastics, printing chemicals
  - planning of a polymer production plant that uses phosgene.
- Oct. 1991 – Jul. 1994:
- Work in the Pfizer process development laboratories, using the results for a thesis:
- process development for the synthesis and scale-up of a new antibiotic molecule.
- Nov. 1994 – Mar. 1997:
- Sigma Aldrich Chemie GmbH, Neu-Ulm, bulk chemicals sales department:
- sale of bulk chemicals
  - assistant sales manager
  - project management for custom synthesis
  - authorised representative for the introduction of ISO 9001.
- Several chemical consulting project done as a sideline, especially on process development for waste gas purification and trouble shooting for waste gas purification plants.

## Maternity Leave

- Apr. 1997 – Apr. 2000:
- More chemical consulting for engineering companies (especially for former employers) done as a sideline

## Freelance Work

- Since Apr. 2000:
- Freelance consulting chemist in the field of industrial chemistry and process engineering.

## Memberships

- [GDCh](#), Gesellschaft Deutscher Chemiker e. V. (Society of German Chemists), chairman of the [FFCh](#) section (freelance chemists and independent laboratory owners) from 2006 – 2013, member of the computational chemistry section.
- [Science Consult KG](#), limited partner since 2007
- [DECHEMA](#) e. V., member of the zeolite group.

## Some reference projects in the field of zeolite science and technology:

### Project

### Work done

Planning of an incineration plant for chemically contaminated sludge

- Prediction of incineration products
- Assessment of the feasibility of zeolite adsorption technique for off gas purification

Methylene chloride recycling plant for an adhesive tape production unit

- Design and cost assessment of a zeolite adsorption unit for solvent recycling under the conditions given (- 70 °C)
- Calculation of per-kg-cost of recycled solvent

Air conditioning plant for the production of ultra-dry cold air

- Design and cost assessment of a zeolite adsorption unit for air desiccation at – 55 °C

Off gas purification for a production unit for cylinder-head gaskets

- Design and cost assessment for various off gas purification techniques, including adsorption

Off gas purification unit for the sewer of a chemical plant

- Design and cost assessment of a zeolite adsorption unit

Sale of several used adsorption plants

- Procurement of prospective buyers

Several test plants for process development in the field of solvent drying

- Design and cost assessment of a zeolite adsorption unit for ethanol drying

Development of several new healthcare products containing zeolites

- Patent and literature research
- Drawing up of methods for the production and assay of laboratory samples of the new product

|   |   |
|---|---|
| Dynamics of a compressed air drying unit with adsorbents          | <ul style="list-style-type: none"><li>• Literature search for data</li><li>• Calculations</li></ul>   |
| Improvement of a portable air conditioning device                 | <ul style="list-style-type: none"><li>• Implementations of features for the reduction of CO<sub>2</sub>, CO, radioactivity and VOC inside of office buildings</li></ul>   |
| PVC production plant, off gas stream of 150.000 m <sup>3</sup> /h | <p>Feasibility study for the capturing of vinyl chloride from the plant's off gas:</p> <ul style="list-style-type: none"><li>• Chemical calculations to predict the behavior of vinyl chloride on adsorbents, in water etc.</li></ul> |
| Natural zeolite mining  | <ul style="list-style-type: none"><li>• Laboratory analysis of the zeolite mineral</li><li>• Prediction of possible applications and market chances of the zeolite</li></ul>  |
| Vitamin production  | <ul style="list-style-type: none"><li>• Literature research for adsorptive methods to work up an aqueous mother liquor in production scale plants</li><li>• Drawing up of laboratory test procedures</li></ul>                        |

### Ibid. in the field of market research, sourcing and marketing of technical products:

|  |   |
|--|---|
| Sourcing of a pharmaceutical compound  | <ul style="list-style-type: none"><li>• Research and negotiations to re-establish a deliverer for a rare pharmaceutical compound</li></ul>  |
| Air conditioning for a laser unit, removal of trace amounts of methanol              | <ul style="list-style-type: none"><li>• Patent, literature and market research to find a filter material that meets the stringent requirements for the process</li></ul>                      |
| Feasibility study for a automobile tyre recycling plant                              | <ul style="list-style-type: none"><li>• Patent, literature and market research to find possible uses for tyre oil and their corresponding net profits</li></ul>                               |
| Feasibility study for the recycling of cooking fat – other uses besides incineration | <ul style="list-style-type: none"><li>• Patent, literature and market research to find possible uses for purified cooking fat as a raw material and their corresponding net profits</li></ul> |

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|--|--|
| Feasibility study for a latent thermal storage unit<br>Particle detection in foodstuff | <ul style="list-style-type: none"><li>• Sourcing of available PCM materials</li><li>• Calculation of unit cost</li><li>• Patent, literature and market research to find applicable detection techniques</li><li>• Calculation of unit cost</li></ul>   |
| Market prices for textile chemistry intermediates                                      | <ul style="list-style-type: none"><li>• Web research to find sources for pricing information which the customer could use himself</li></ul>  |
| DeNOx/SCR-catalyst market  | <ul style="list-style-type: none"><li>• Market research for most important producers, product types and prices, applications</li></ul>   |
| Marketing of new environmental technology products                                     | <ul style="list-style-type: none"><li>• Articles, direct mail copy and internet text for the marketing campaigns of technological products</li></ul>   |
| Due diligence for several company takeovers  | <ul style="list-style-type: none"><li>• Research for market data for the companies' individual products: Competitors, (future) uses, substitution risks</li><li>• Suggestions for additional market niches and product developments</li></ul>  |
| Intellectual property management   | Search for potential buyers for several patents on chemical synthesis: <ul style="list-style-type: none"><li>• Literature and patent research</li><li>• Identification of potential applications</li><li>• Design of prospectus materials</li><li>• Contact with several potential buyers to get feedback.</li></ul> |
| Naturopathy  | <ul style="list-style-type: none"><li>• PSUR researches for several homeopathic preparations and other naturally healing ingredients</li></ul>   |

## Languages

Besides German:

- Croatian/Serbian: Native speaker
- English: Business fluent
- Italian: Fair.