

Dmitry V. Kazachkin

434 Penns Way, Basking Ridge, NJ. Cellular: (267) 699-8514, dkazachkin@gmail.com

EXPERIENCE

Ingredion Inc.

Process Technology Group (PTG), Bridgewater NJ

Principal Engineer

(7/19 – present)

Senior Engineering Associate

(10/13 – 7/19)

Plan and coordinate development of new products and optimization/improvement of existing processes. Perform economic evaluation, scale-up, and provide support through all steps of commercialization for new products. Supervise pilot and semi-works trials.

Renmatix

R&D Department, King of Prussia, PA

Senior Research Scientist

(04/12 – 10/13)

Research Scientist

(04/09 – 04/12)

Contributed to the development of Renmatix' process for conversion of lignocellulosic biomass to sugars. Planned and executed research projects, analyzed data, and summarized in reports major findings. Coordinated external R&D projects. Assisted business team to attract new customers/partners. Supported engineering team on design of commercial plant. Coordinated project with Waste Management Company on development of a process for conversion of wastes to valuable products.

Temple University

Department of Chemistry, Philadelphia, PA

Visiting Researcher

(03/06 – 04/09)

Project: Carbon nanoporous materials.

Goal: To investigate adsorption and optical properties of carbon nanoporous materials.

- Studied thermally controlled decomposition of oxygen functionalities. Studied accessibility of endohedral sites of single-wall carbon nanotubes (SWCNTs) before and after decomposition of oxygen functionalities.
- Discovered effect of screening of molecules adsorbed inside SWCNTs from infrared light (**the findings were covered in C&EN journal**).
- Experimentally described activated adsorption/desorption of molecules on nanoporous carbons. The work may impact technological processing of carbon nanoporous materials using solvents.
- Studied the effect of preparation and following pretreatment of carbide derived carbons (CDCs) on stability of chemical functionalities. Results can be used to tune adsorption properties of CDCs for specific applications.
- Synthesized and studied Pd/SWCNT composites for application in hydrogen sensing (NASA project).
- Investigated chemical functionalities of controllably modified carbon black (elemental mercury trapping).
- Trained graduate students: methods of physical characterization of materials, high vacuum techniques.
- Planned and executed research projects. Published research findings.

Calgon Carbon Corporation

R&D Department, Pittsburgh, PA

Intern

(05/08-08/08)

Project: Cement friendly carbon development.

Goal: To develop cement friendly carbon for elemental mercury removal from flue gases of power plants. Carbon material should be effective in mercury trapping and should not adsorb air entraining agent used for cement production.

- Conducted formulation studies and trial testing of modified carbons for mercury removal.
- Suggested accelerated path for material quality testing.
- The [product](#) was developed and became available on the market in six months.

Boreskov Institute of Catalysis

Department of physical methods for catalyst characterization, Novosibirsk, Russia

Research Assistant

(09/98-05/01)

Project: Investigation of catalytic activity and mechanism of action of CoMoS_x catalysts for oil purification.

Goal: Study the effect of preparation, pretreatment, and regeneration of alumina supported CoMoS_x catalysts on their activity in desulfurization processes. Characterize active centers of CoMoS_x.

- Investigated impact of preparation and pretreatment conditions of CoMoS_x catalysts for hydrogen-assisted desulfurization of thiophene (model compound present in crude oil).
- Found optimum conditions for regeneration of deactivated CoMoS_x catalysts.
- Provided an evidence for existence of Co³⁺ active centers predicted for CoMoS_x catalysts.

EDUCATION

PhD. Chemical Engineering, the University of Pittsburgh, Pittsburgh, PA **2009**

MS. Chemical Engineering, the University of Pittsburgh, Pittsburgh, PA **2006**

BS. Chemistry, Novosibirsk State University, Novosibirsk, Russia **2000**

PATENTS AND PUBLICATIONS

[Patent](#) (US 8,999,065B2). 7 publications in peer-reviewed journals. News coverage about my work ([C&EN, May 23, 2011](#)). 17 presentations (2 invited).



Publications