

## Bernard Dam

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## Research Interests

Single crystal growth and morphology, Incommensurate structures, Thin film growth (MBE, PLD, Sputtering, ALD) and characterization,  $HT_c$ -superconductivity, Hydrogen storage in metals, Hydrogen sensors, Smart windows, Oxyhydrides, Photochromism, e-Refinery.

## Research output

Over 270 refereed research papers, 14 patents, (co-)promotor of 24 PhDs (5 yet to come)

## Positions TUD

2021-2023 **Head of the Department** of Chemical Engineering  
2015-2018 **Co-founder** e-Refinery institute  
2009-2019 **Head of the Section** Materials for Energy conversion and storage (MECS)  
2009-2023 **Full professor** at the Department of Chemical Engineering

## Previous Positons

2006-2009 **Co-founder of the BSc program SBI (Science, Business and Innovation)**, VU Amsterdam  
1992-2009 **Assistant/Associate professor**; Condensed Matter Physics, Faculteit Exacte Wetenschappen, VU Amsterdam  
1986-1992 **Researcher**  
Philips Research Labs, Eindhoven, NL

## Education

1982-1984 **PhD**: Growth and morphology of classical and superspace crystals, Catholic University Nijmegen.  
1975-1982 **Drs**, Physical Chemistry (cum laude), Majors in molecular spectroscopy (EPR) and solid-state chemistry, and a minor in philosophy of science, Catholic University Nijmegen  
1969-1975 **Gymnasium beta** Thorbecke scholengemeenschap Arnhem

## Hobby's

Classical music, singing  
Photography  
History, Philosophy, Theology

## Overview of TU Delft activities 2009-2023

### Professional Service and commissions of trust

2022-2023	Coordinator HYET COWA2 program
2018-2023	Program director Shell/TKI program Towards Large Scale Electrochemical Conversion Systems (TOeLS)
2018-2023	Program director TTW Perspective program 'Electrons to Chemical Bonds'
2015-2020	Scientific Director Advanced Dutch Energy Materials (ADEM)
2018	Chairman Research Audit committee 2014-2017 for the Faculty of Applied Engineering, Antwerp university, 12-13 nov
2014-2022	Member of the advisory board Leiden Institute of Chemistry (LIC)
2022-2023	Member of the core team 'Groenvermogen' preparing the Groenvermogen-I calls
2017-2022	Member of the Management Team of the 4TU Research Centre High-Tech Materials (4TU-HTM)
2018-2022	Member of the advisory table Chemistry to the ENW board
2017-2022	Member of the advisory ECCM committee NWO/topsectoren
2009-2019	Member of the board of the 'NNV-sectie Energie en Klimaat', (chairman 2010-2013)
2018	Co-author Roadmap large scale energy storage, ECCM
2010-2018	Chairman of 'studiegroep Chemie van de Vaste Stof en Materiaalkunde van Chemische Wetenschappen'
2012-2015	Dutch representative of the IEA HIA (Hydrogen Implementation Agreement) task 36 on water splitting
2011-2015	Dutch representative of the COST network on metal hydride nano-particle hydrogen storage
2009-2015	Dutch representative of the IEA HIA (Hydrogen Implementation Agreement) Task 22/32 on hydrogen storage
2012-2015	Sungreen advisory board/steering committee
2010-2013	Member of the program committee of the ACTS Sustainable Hydrogen program 2010-2013
2009-2010	Member of the workgroup "Solar energy" of the 'Nationale Onderzoeksagenda Energie'
2009-2010	Member of the workgroup "Opslag en Transport" of the 'Nationale Onderzoeksagenda Energie'

### Organization of scientific meetings

2016- now	Member international steering committee International Symposium on Metal-Hydrogen Systems
2022+2014	Co-organizer of the Chromogenic Materials and Devices session, E-MRS
2019	Organizer of the workshop on Materials Science Infrastructure in the Netherlands
2017	Co-organiser and Chair of the 1 <sup>st</sup> National e-refinery symposium,

- 2016 Organizer of the Shell Long Range Research workshop, TU Delft,
- 2017 Co-chair of the 2017 Gordon Research Conference on Hydrogen in Metals, USA
- 2016 Chair and organizer of the 2016 International Conference on Electrochromic Materials, IME-12, Delft
- 2016 Member of the organizing committee of the Annual Meeting van de International Society of Electrochemistry (ISE) 2016, The Hague World Forum
- 2015 Member of the Program Committee Chains, Veldhoven
- 2015-2017 Member of the Scientific Board of the 'Fuel Cell and Hydrogen Joint Undertaking'
- 2013-2014 Member of the the International Advisory Board of Symposium FB "Hydrogen Production and Storage" of the Forum on New Materials, CIMTEC 2013, June 15-20, 2014, Montecatini, Italy
- 2011-2015 Member of the steering committee of the International conference on Hydrogen and Energy, Stoos
- 2012-2014 Member of the Program Committee of the SPIE conference on Photonic Applications for Aerospace, Transportation, and Harsh Environment III
- 2012 Member of the local organizing committee European Electroceramics XII conference, June XX 2012, Enschede
- 2012 Rapporteur for the working group 'Fuel Cells and Hydrogen' within the exercise 'Defining a SET-Plan European Energy Education and Training Initiative'
- 2010 Dutch delegate for the Eranet expert meeting to define a future European call nanomaterials for energy, Amsterdam, 26-27 Nov 2010
- 2010 Member of the Int Advisory board of the Symposium 'Materials and Process Innovations in Hydrogen Production and Storage' of The 5th Forum on New Materials, CIMTEC 2010, June 13-18, 2010, Florence, Italy
- 2010 Organizer of the Energy storage focus session, FOM-Veldhoven 2010, Veldhoven, 20-21 January 2010
- 2009 Co-organizer of the symposium 'Nuclaire splijtingsenergie' NNV section 'Energie en Klimaat', Delft, 3 november 2009

### Organizational Roles within TU Delft

- 2021 Director e-Refinery institute, March 2021- January 2022;  
Board member since the start of this initiative;  
Scientific Director E-refinery initiative, TU Delft, spring 2017-2021;
- 2020-2023 Chair department of chemical engineering, October 2021 – September 2023;  
Interim chair department of chemical engineering, January-June 2020; March 2021 till October 2021
- 2017-2024 Vertrouwenspersoon wetenschappelijke integriteit en contactpersoon klokkenluiders/vertrouwenspersoon bestuurlijke integriteit
- 2021-now Member of the TUD integrity board
- 2020 Member of an ad hoc committee advising the CvB on donations
- 2017-now Member of the TUD-Shell supervisory board
- 2018-now Member of the 'Commissie Geschillen Promoties'
- 2015-2019 External member of the TBM exam committee
- 2011-2019 Member Facultaire loopbaan commissie TNW
- 2017-2018 Member of the curriculum committee Ba-MatSci 3mE

2018 Member of the 'Commissie Herijking Integriteitsbeleid TU Delft'  
 2013-2018 Chairman of the TNW exam committee  
 2017 Member of the midterm review committee faculty L&R  
 2015-2018 Member daily board Department Chemical Engineering  
 2016-2017 Member of the curriculum committee Ba-MST  
 2016-2017 Member curriculum committee MSc-SET  
 2016 Chairman of the midterm evaluation committee LST/Chemistry master program Leiden University  
 2015 Member midterm evaluation committee SET Master program  
 2013-2014 Member of the BSc-Energy curriculum committee, Sept 2013-Nov 2014  
 2010-2014 Scientific Director 3TU center of excellence Sustainable Energy Technology (SUNNET)  
 2010-2015 TNW representative of the Delft Energy Initiative  
 2010-2015 Member of the Safety committee ChemE  
 2013-2015 Faculty evaluation committee UTQ  
 2011-2013 Chairman of the opleidingscommissie SET  
 2010-2013 Member of the exam committee MST

### Lecture courses at TUD 2009-till present

<b>Educational program</b>	<b>Subject</b>	<b>Academic years</b>
BSc MST	Chemical Thermodynamics	2014-2022
MSc-SET	Hydrogen Technology	2017-2018
MOOC	Energy Storage	2016-2017
MSc-SET	Thermodynamics	2015-2018
BSc-MST	Science and Technology of the hydrogen economy	2012-2014
BSc-MST/LST/TA	Chemical Thermodynamics	2011-2013
BSc-TN	Wetenschaps en argumentatieleer	2010-2012
MSc-3mE	Structure of Materials	2009-2011

