



## Personal profile

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## Personal profile

### Research outputs

1. **Hybrid ceramic nanofiltration membranes prepared by impregnation and solid-state grafting of organo-phosphonic acids.** / Kyriakou, Nikos; Boorsma, Elmar; Aardema, Gert Jan et al.  
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In: Water research, Vol. 220, 118593, 15.07.2022.
4. **Controlled Nanoconfinement of Polyimide Networks in Mesoporous  $\gamma$ -Alumina Membranes for the Molecular Separation of Organic Dyes.** / Kyriakou, Nikos; Winnubst, Louis; Drobek, Martin et al.  
In: ACS Applied Nano Materials, Vol. 4, No. 12, 24.12.2021, p. 14035-14046.
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8. **Phase and microstructural characterizations for  $\text{Ce}_{0.8}\text{Gd}_{0.2}\text{O}_{2-\delta}\text{-FeCo}_2\text{O}_4$  dual phase oxygen transport membranes.** / Zeng, Falin; Malzbender, Jürgen; Baumann, Stefan et al.  
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9. **Hydrolytic stability of PEG-grafted  $\gamma$ -alumina membranes: Alkoxysilane vs phosphonic acid linking groups.** / Kyriakou, Nikos; Pizzoccaro, Marie-Alix; Nijmeijer, Arian et al.  
In: Microporous and mesoporous materials, Vol. 307, 110516, 11.2020.
10. **New Method toward a Robust Covalently Attached Cross-Linked Nanofiltration Membrane.** / Kyriakou, Nikos; Merlet, Renaud; Willott, Joshua D. et al.  
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11. **Hybrid ceramic membranes for organic solvent nanofiltration: State-of-the-art and challenges.** / Merlet, Renaud; Pizzoccaro, Marie-Alix; Nijmeijer, Arian et al.  
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## Activities

**Hybrid polymeric-ceramic membranes: Tuning microporous ceramic membranes for solvent nanofiltration**  
A.J.A. Winnubst (Invited speaker)  
5 Nov 2019

**Tuning microporous ceramic membranes for solvent nanfiltration**  
A.J.A. Winnubst (Invited speaker)  
16 Jun 2019 → 20 Jun 2019

**Microporous ceramic membranes for gas separation: New avenues for the fabrication of zeolite membranes**  
A.J.A. Winnubst (Invited speaker)

25 May 2019 → 29 May 2019

**Hybrid ceramic membranes prepared by SI-ARGET-ATRP: challenges and possibilities**

R.B. Merlet (Contributor), Marie-Alix Pizzoccaro-Zilamy (Speaker), A. Nijmeijer (Contributor) & A.J.A. Winnubst (Contributor)  
2019

**Chemistry and Materials Science: An Introduction on Ceramic Membranes**

A.J.A. Winnubst (Speaker)  
11 Oct 2018

**Application of ceramic nanofiltration membranes for water treatment in oil sands mines**

Sandra Motta Cabrera (Speaker), Arian Nijmeijer (Contributor) & A.J.A. Winnubst (Contributor)  
20 Jun 2018

**Tuning microporous ceramic membranes for gas separations and solvent nanofiltration**

A.J.A. Winnubst (Speaker)  
26 Mar 2018

**Fabrication and properties of ceramic membranes, used for separations under demanding conditions**

A.J.A. Winnubst (Speaker)  
4 Nov 2017 → 7 Nov 2017

**Tuning Microporous Ceramic Membranes for Gas Separation and Solvent Nanofiltration**

Louis Winnubst (Speaker)  
16 May 2017 → 18 May 2017

**Long-term flexibility-based structural and chemical evolution in microporous organosilica membranes: a problem and solution**

A.P. Dral (Speaker), Kristianne Tempelman (Contributor), Emiel Kappert (Contributor), Aloysius J.A. Winnubst (Contributor), Nieck Edwin Benes (Contributor) & J.E. ten Elshof (Contributor)  
17 Apr 2017 → 21 Apr 2017

**Inorganic membranes for gas separation**

Louis Winnubst (Speaker)  
17 Mar 2017

**Ceramic membranes for separations under demanding conditions**

Louis Winnubst (Speaker)  
21 Aug 2016

**Shaping the pores of ceramic membranes for gas separation or nanofiltration**

Louis Winnubst (Speaker)  
18 Jul 2016

**Solgel-derived hybrid silica membranes for gas separation - A detailed study**

Louis Winnubst (Speaker)  
10 Jul 2016

**Inorganic membranes for gas separation**

A.J.A. Winnubst (Speaker)  
23 Mar 2016

**Microporous Ceramic Membranes for Gas Separation**

Aloysius J.A. Winnubst (Speaker)

4 Nov 2015

**Studies on ongoing structural changes in hybrid glassy and ceramic materials during prolonged thermal treatment**

Albertine Petra Dral (Speaker), Emiel Kappert (Speaker), Kristianne Tempelman (Speaker), Kasper Wenderich (Speaker), Guido Mul (Speaker), Aloysius J.A. Winnubst (Speaker), Nieck Edwin Benes (Speaker) & Johan E. ten Elshof (Speaker)  
21 Jun 2015

**Polymer-functionalized ceramic membranes for use in organic solvent nanofiltration**

Aloysius J.A. Winnubst (Speaker)  
14 Jun 2015

**Membrane separation layer by means of sol-gel techniques**

A.J.A. Winnubst (Speaker)  
26 May 2015

**Structural and hydrothermal stability of organosilica membranes**

Albertine Petra Dral (Speaker), Emiel Kappert (Speaker), Kristianne Tempelman (Speaker), Aloysius J.A. Winnubst (Speaker), Nieck Edwin Benes (Speaker) & Johan E. ten Elshof (Speaker)  
22 May 2015

**Inorganic membranes for gas separation**

A.J.A. Winnubst (Speaker)  
9 Apr 2015

**Meso- and microporous ceramic membranes: Some developments in Twente**

Aloysius J.A. Winnubst (Speaker)  
8 Apr 2015

**Polymer-functionalized ceramic membranes for use in organic solvent nanofiltration**

Aloysius J.A. Winnubst (Speaker)  
11 Mar 2015

**Polymer-functionalized ceramic membranes for use in organic solvent nanofiltration**

A.J.A. Winnubst (Speaker)  
21 Jan 2015

**Inorganic membranes for energy efficient gas separation and nanofiltration**

Aloysius J.A. Winnubst (Speaker)  
30 Oct 2014

**Polymer-functionalized ceramic membranes for use in organic solvent nanofiltration**

Aloysius J.A. Winnubst (Speaker)  
20 Jul 2014

**Keramische membranen: Nieuwe ontwikkelingen en uitdagingen**

Aloysius J.A. Winnubst (Speaker)  
16 Apr 2014

**Micro- and meso-porous ceramic membranes for energy-efficient gas separation and nanofiltration**

Aloysius J.A. Winnubst (Speaker)  
10 Mar 2014

**Efficient water treatment in Canadian oil sands mine**

Sandra Motta Cabrera (Speaker), Louis Winnubst (Contributor), Arian Nijmeijer (Contributor) & Ingolf Voigt (Contributor)  
13 Nov 2013

**Meso/microporous ceramic membranes for gas separation and nanofiltration: fabrication and some properties**  
Aloysius J.A. Winnubst (Speaker)  
8 Nov 2013

**Microporous supported ceramic membranes: Fabrication and characterization**  
Aloysius J.A. Winnubst (Speaker)  
4 Nov 2013

**Micro- and mesoporous ceramic membranes for energy-efficient gas separation and nanofiltration**  
Aloysius J.A. Winnubst (Speaker)  
25 Oct 2013

**Functionalization of ceramic membranes by polymer grafting for solvent nanofiltration**  
A.F. Pinheiro de Melo (Speaker), Aloysius J.A. Winnubst (Speaker) & Arian Nijmeijer (Speaker)  
23 Jun 2013

**Porous Ceramics: Shaping, Pore Size and Pore Morphology**  
Aloysius J.A. Winnubst (Speaker)  
29 Jan 2013

**A generic method for inorganic porous hollow fibers preparation with shrinkage-controlled small radial dimensions**  
Maria W.J. Luiten-Olieman (Speaker), Aloysius J.A. Winnubst (Speaker), Teunis Cornelis Bor (Speaker), Matthias Wessling (Speaker), Arian Nijmeijer (Speaker) & Nieck Edwin Benes (Speaker)  
23 Sept 2012

**Micro and mesoporous ceramic membranes for energy efficient gas separation, pervaporation and nanofiltration**  
Aloysius J.A. Winnubst (Speaker)  
14 Jul 2012

**Ceramic-Supported Polymeric Membranes for Nanofiltration at Extreme Conditions**  
Aloysius J.A. Winnubst (Speaker), A.F. Pinheiro de Melo (Speaker) & Arian Nijmeijer (Speaker)  
20 May 2012

**Progress on research at the Inorganic Membranes group of the University of Twente**  
Aloysius J.A. Winnubst (Speaker)  
8 Mar 2012

**Tailoring the molecular separation properties of hybrid silica membranes**  
H.L. Castricum (Speaker), Goulven Paradis (Speaker), M.C. Mittelmeijer-Hazeleger (Speaker), R. Kreiter (Speaker), J.F. Vente (Speaker), Aloysius J.A. Winnubst (Speaker) & Johan E. ten Elshof (Speaker)  
19 Jul 2010

**Processing of ceramics by means of suspensions and sols**  
Aloysius J.A. Winnubst (Speaker)  
10 Nov 2005

**Wear-resistant CuO-doped zirconia ceramic with low friction**  
Aloysius J.A. Winnubst (Speaker)  
24 Oct 2005

**Effect of Annealing in O<sub>2</sub> or N<sub>2</sub> on the aging of Fe0.5Mn1.84Ni0.66O<sub>4</sub> NTC-Ceramics**  
Aloysius J.A. Winnubst (Speaker), Zhongbing Wang (Speaker), Chunhua Zhao (Speaker), Pinghua Yang (Speaker) & Chusheng Chen (Speaker)  
23 Oct 2005

**Dense Ceramic Membranes and Sintering of Nano Composites**

Aloysius J.A. Winnubst (Speaker)  
20 Oct 2005

**Sintering: Theory and practice**

Aloysius J.A. Winnubst (Speaker)  
18 Oct 2005

**Wear, Friction, Sintering and Microstructure of CuO-doped 3Y-TZP composites**

Aloysius J.A. Winnubst (Speaker)  
14 Oct 2005

**Wear and Friction of Ceramics and Composites**

Aloysius J.A. Winnubst (Speaker)  
13 Oct 2005

**Education at the University of Twente - Research on Ceramic Materials in the Inorganic Materials Science group**

Aloysius J.A. Winnubst (Speaker)  
12 Oct 2005

**Compaction, consolidation and other green-forming methods for ceramics**

Aloysius J.A. Winnubst (Speaker)  
11 Oct 2005

**Wet chemical preparation of ceramic powders and coatings**

Aloysius J.A. Winnubst (Speaker)  
27 Sept 2005

**Fabrication and wear/friction properties of nanocrystalline ceramics**

Aloysius J.A. Winnubst (Speaker)  
19 Jan 2005

**Sintering behaviour of CuO-doped 3Y-TZP ceramics**

S. Ran (Speaker), A.J.A. Winnubst (Speaker), K.W. Wiratha (Speaker) & Da.H.A. Blank (Speaker)  
20 Oct 2004

**Sintering behaviour of CuO-doped 3Y-TZP ceramics**

A.J.A. Winnubst (Speaker), S. Ran (Speaker), K.W. Wiratha (Speaker) & D.H.A. Blank (Speaker)  
5 Jul 2004

**Sintering behaviour of 0.8mol%-CuO-doped 3Y-TZP ceramics**

S. Ran (Speaker), A.J.A. Winnubst (Speaker), K.W. Wiratha (Speaker) & David H.A. Blank (Speaker)  
18 Apr 2004

**A wear-resistant zirconia ceramic for low friction application**

Aloysius J.A. Winnubst (Speaker)  
29 Jun 2003

**Keramiek als Coating**

Aloysius J.A. Winnubst (Speaker)  
21 Jun 2003

**Keramische Materialen**

Aloysius J.A. Winnubst (Speaker)

25 Apr 2003

**Biomaterialen; Materialen toegepast in de medische implantologie**

Aloysius J.A. Winnubst (Speaker)

20 Mar 2003

**Plasticity in nanocrystalline zirconia and its properties**

Aloysius J.A. Winnubst (Speaker)

1 Dec 1994

**Hot and sinter forging as a tool for improving conductivity and strength of grain boundaries in zirconia**

Aloysius J.A. Winnubst (Speaker)

1 Nov 1994

**Sinter and hot forging of nanocrystalline zirconia and zirconia alumina ceramics**

Aloysius J.A. Winnubst (Speaker)

1 Oct 1994

**The synthesis and characterization of nanocrystalline Y-TZP**

C.D. Sagel-Ransijn (Speaker), Aloysius J.A. Winnubst (Speaker), Anthonie Burggraaf (Speaker) &amp; H. Verweij (Speaker)

12 Sept 1994

**Plasticity of zirconia and zirconia alumina ceramics and its special grain boundary properties**

Aloysius J.A. Winnubst (Speaker)

1 Sept 1994

**Superplasticity of nanocrystalline zirconia ceramics**

Aloysius J.A. Winnubst (Speaker), M.M.R. Boutz (Speaker), Y. He (Speaker), Anthonie Burggraaf (Speaker) &amp; H. Verweij (Speaker)

30 Jun 1994

**Chemische bereiding en eigenschappen van oxidische poeders, membranen en dichte keramiek**

A.J.A. Winnubst (Speaker)

7 Jan 1994

**Microstructural development and electrical properties of YSZ-Pd composite**

C.S. Chen (Speaker), G.Z. Cao (Speaker), Aloysius J.A. Winnubst (Speaker), Bernard A. Boukamp (Speaker) &amp; Anthonie Burggraaf (Speaker)

24 Dec 1993

**Preparation and characterisation of nanometer titania particles**

G.W. Koebrugge (Speaker), Aloysius J.A. Winnubst (Speaker) &amp; Anthonie Burggraaf (Speaker)

3 Dec 1992

**Sinter forging as a tool for improving the microstructure of zirconia toughened alumina**

Aloysius J.A. Winnubst (Speaker), Y. He (Speaker), P.M.V. Bakker (Speaker), R.J.M. Olde scholtenhuis (Speaker) &amp; Anthonie Burggraaf (Speaker)

17 Aug 1992

**Low temperature sinter forging of Y-TZP nanostructured**

M.M.R. Boutz (Speaker), Aloysius J.A. Winnubst (Speaker), Anthonie Burggraaf (Speaker), M. Naher (Speaker) &amp; C. Carry (Speaker)

16 Aug 1992

**Preparation and characteristics of nanocrystalline ceramic materials**

Aloysius J.A. Winnubst (Speaker)

12 Aug 1992

**Stability of aqueous suspensions of high surface area zirconia powders in the presence of polyacrylic acid polyelectrolyte**

M.M.R. Boutz (Speaker), R.J.M. Olde scholtenhuis (Speaker), Aloysius J.A. Winnubst (Speaker) & Anthonie Burggraaf (Speaker)

27 Apr 1992

**Preparation, microstructural control and superplasticity of nanostructured yttria stabilized tetragonal zirconia ceramics**

M.M.R. Boutz (Speaker), R.J.M. Olde scholtenhuis (Speaker), Aloysius J.A. Winnubst (Speaker) & Anthonie Burggraaf (Speaker)

8 Apr 1992

**Sintergedrag van nanocrystalline zirconia**

Aloysius J.A. Winnubst (Speaker)

21 Mar 1991

**Powder preparation and microstructure development during sintering of nanocrystalline tetragonal zirconia**

A.J.A. Winnubst (Speaker)

20 Mar 1991

## **Projects**