

# Safety on a small and large scale



Working with tiny particles, Ruud van Ommen and his research group hope to eventually make an impressively significant impact with their work on water purification. About 750 million people currently have no access to safe drinking water, particularly in Sub-Saharan Africa and Southeast Asia. One of the causes in Asia is groundwater contamination due to rapid industrial development. A potential solution: metal oxide-based nanoparticles that can destroy chemical and biological pollutants. "A lot of people around the globe are experimenting with nanotechnology",

says Van Ommen, "but not many can make the transition from small-scale lab findings to large-scale reality." By combining knowledge of nanomaterials and reactor design, his group hopes to make the difference. But the lofty goal of clean drinking water should not distract from the fact that nanomaterials have also raised safety concerns, as the risks are often unknown or difficult to determine. A reason for Van Ommen to collaborate with TU Delft colleagues campus-wide on further developing the Safe-by-Design approach to engineering.



Scan the QR code for the  
complete digital version  
of this magazine



# Today's grand challenges can no longer be solved with a single perspective or approach

Aukje Hassoldt

Dean TU Delft Faculty of Technology, Policy and Management

# progreSSIon

On the occasion of 10 years TU Delft Safety & Security Institute

---

# SAFETY &

---

# SECURITY IN

---

# A CHANGING WORLD

---

Safe by Design

**“Engineers must learn to talk about ethics”**

Field perspective

**All in for safety & security**

Opinion

**We need an inclusive approach to flood risks**

Road, air, rail

**Safety & security in a transport sector on the move**

Discussion

**Are sustainability and safety incompatible?**

TU Delft Safety & Security Institute

**An institute building bridges**