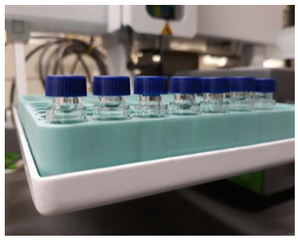
FACULTY OF
BIOSCIENCE ENGINEERING

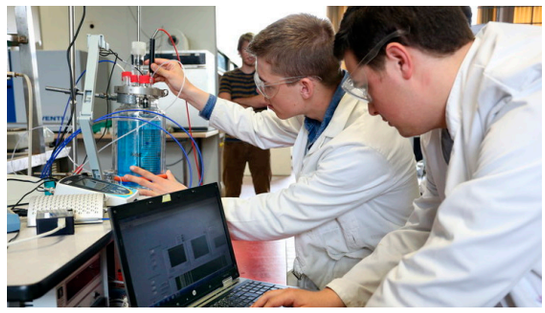
DEPARTMENT OF GREEN CHEMISTRY AND TECHNOLOGY

Internationally recognized research related to both fundamental and applied aspects of chemistry in the domain of bioscience engineering, comprising advanced analysis, (bio)chemical as well as physicochemical conversion and treatment techniques, and sustainable process design.



TOPICS

- Advanced analytical chemistry and ultra-trace (high-resolution) mass spectrometry
- Applied ecochemistry with focus on trace elements, isotopes, and organic micropollutants
- Organic synthesis, use of renewable resources, bio-organic chemistry, microreactor technology
- Particle and interfacial technology
- Thermochemical biomass conversion
- Ecotechnology for air and water treatment and resource recovery
- Biosystems control
- Life cycle assessment and sustainable process design
- Catalysis



IMPACT

- Sustainable (re)use of biological raw material and natural resources
- Technological solutions, fit-for-use in different (industrial) and international contexts (e.g. developing countries)
- Expertise and services for SME's and non-profit organisations for their water treatment and re-use

GHENT
UNIVERSITY

CONTACT

+32 9 264 60 01

www.ugent.be/bw/gct

TENURED ACADEMIC STAFF

Pascal Boeckx	Analyses and application of isotopes in bioscience, tropical terrestrial ecosystems, greenhouse gas emissions and sinks
Matthias D'hooghe	Organic and bioorganic chemistry, heterocyclic chemistry, synthesis of bioactive compounds
Norbert De Kimpe	Organic synthesis, heterocyclic chemistry, agricultural chemistry, natural products
Kristof Demeestere	(Ultra-)trace analysis of organic compounds in ecosystems, emerging organic micropollutants in the aquatic environment, advanced oxidation processes and water treatment
Steven De Meester	Sustainable design of process chains, separation processes, downstream processing
Jo Dewulf	Environmental and clean technology
Gijs Du Laing	Analysis, chemistry and technology of trace elements in food and environment
Ann Dumoulin	Chemical analysis: water, environment, materials
Philippe Heynderickx	Kinetics, heterogeneous catalysis, parameter estimation, environmental, mass spectrometric analysis, experiment-model-based analysis; organic chemistry, process engineering, environmental chemistry
Sven Mangelinckx	Chemistry of non-proteinogenic amino acids, azaheterocycles and natural products; isolation, analysis, synthesis and modification of bioactive natural products
Erik Meers	Environmental chemistry & technology for resource recovery in the agro-food value chain
Wolter Prins	Thermochemical conversion of biomass, especially related to advanced processes of gasification and pyrolysis of biomass, research in relation to the production of bio-oil, biochar and torrified biomass
Frederik Ronsse	Thermochemical biomass conversion, biochar production, processing techniques
Diederik Rousseau	Natural water purification systems (algae ponds, reed lands, ...), water quality
Christian Stevens	Heterocyclic chemistry, aminophosphonate chemistry, micro-reactortechnology, chemical modification of renewable sources
Filip Tack	Biogeochemistry of trace elements, environmental impact of heavy metals, pollution of soil and sludge, chemical analysis
Paul Van Der Meeren	Particle and interfacial technology
Stijn Van Hulle	Application of industrial water treatment (advanced) oxidation processes, LED H2O
Herman Van Langenhove	Environmental chemistry and technology, air pollution, odour interference
Arne Verliefde	Water treatment: drinking and industrial water, physicochemical treatment of waste water
Pieter Vermeir	Nanotechnology: detection and characterization, chemical analysis
Eveline Volcke	Biosystems control and design, environmental engineering, bioconversion processes
Serge Zhuiykov	Nanostructures, two-dimensional semiconductors for environmental (gas & water) sensors, energy conversion, solar cells and supercapacitors