



Webinar - Gesichtsmasken der nächsten Generation - Schweizer Hightech-Innovation

Dr. Christoph Geers

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Adolphe Merkle Institute

University of Fribourg

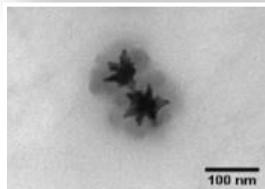
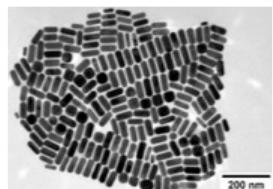
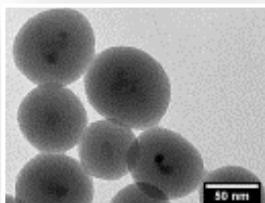
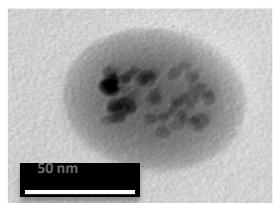
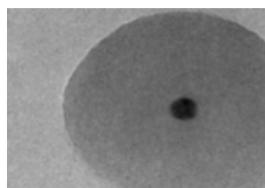
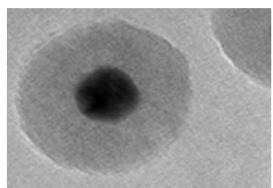
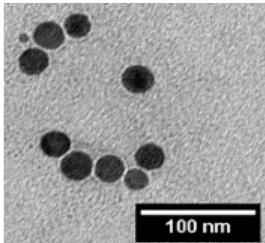
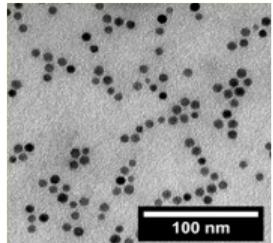


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excellence in pure and applied nanoscience

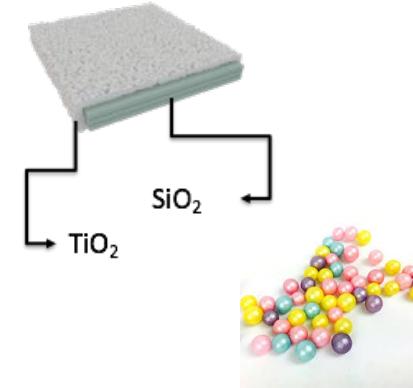
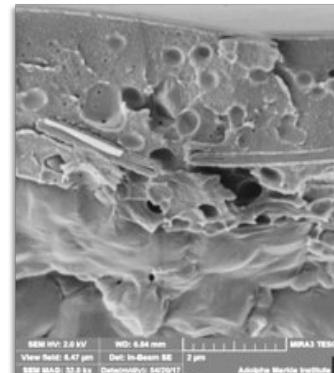


Analytics Examples

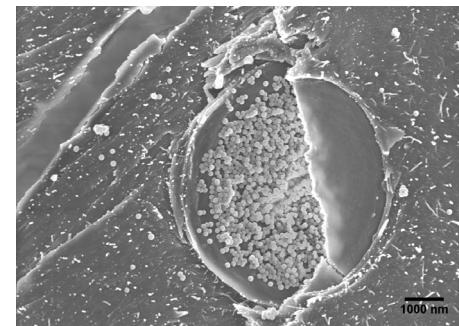
“Simple samples”



Complex questions

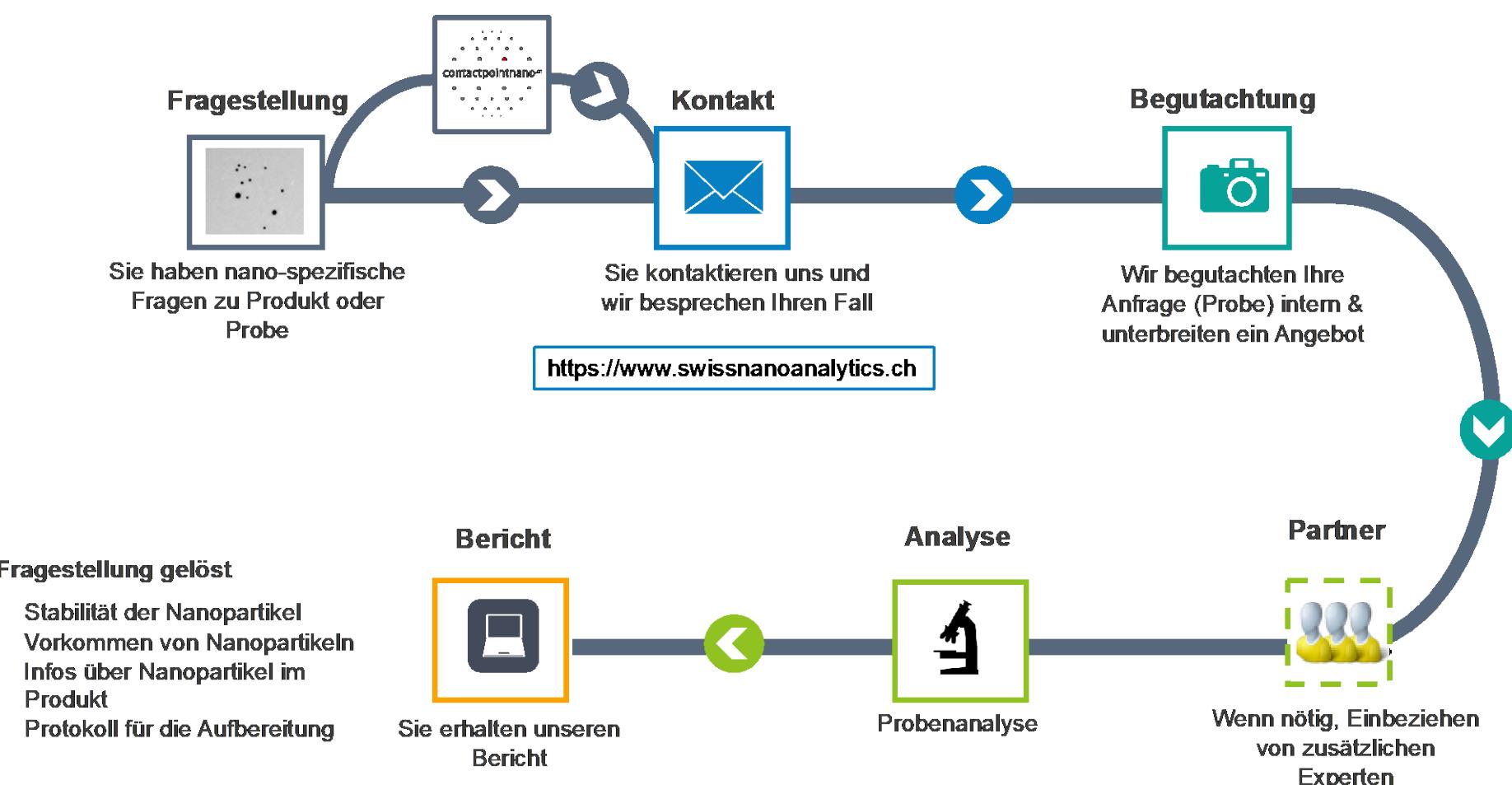


Sugar pearls



Wood preservative

Process



Large variety of masks



Active masks

The Antiviral Mask for the Community

Construction and strengths



COPPER INFUSED **FACE MASK**

— IS PERFECT FOR —



Killing
Germs



Allergy
Protection



Filtering
Pollution



Safe
Traveling



Sensitive
Lungs

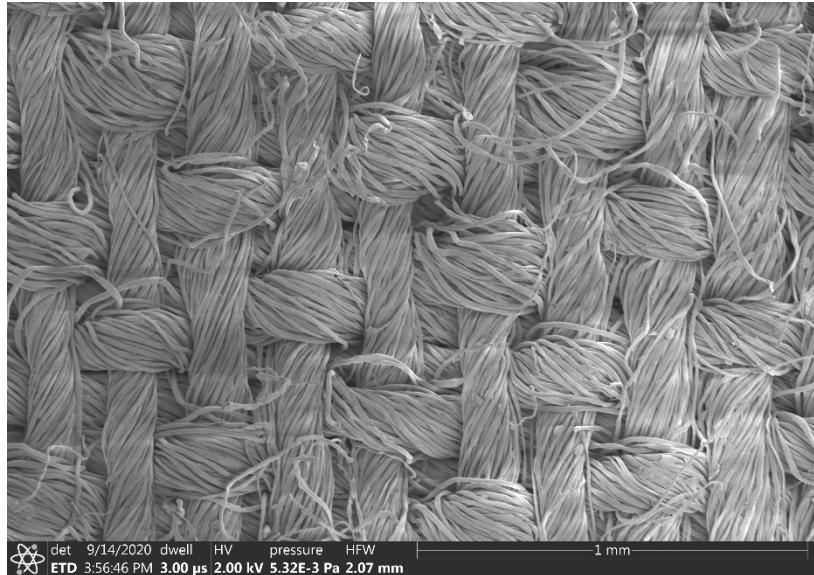


Using
at Work

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c/o ComoNExT – Science and Technology Park
Via Cavour 2, 22074 Lomazzo (CO)

Hayes Industrial Estate, Godstone Road, Caterham, Surrey
CR3 6SF

Active masks



Cotton mask

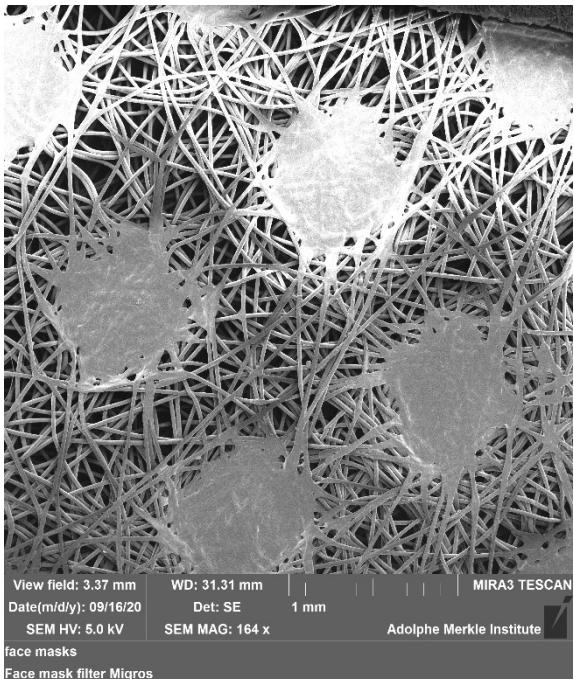
Copper infused
mask



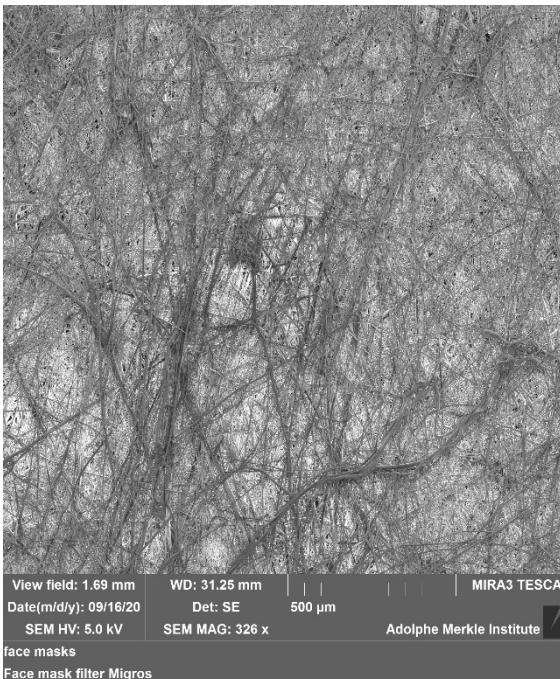
Active masks

5 Layered face mask

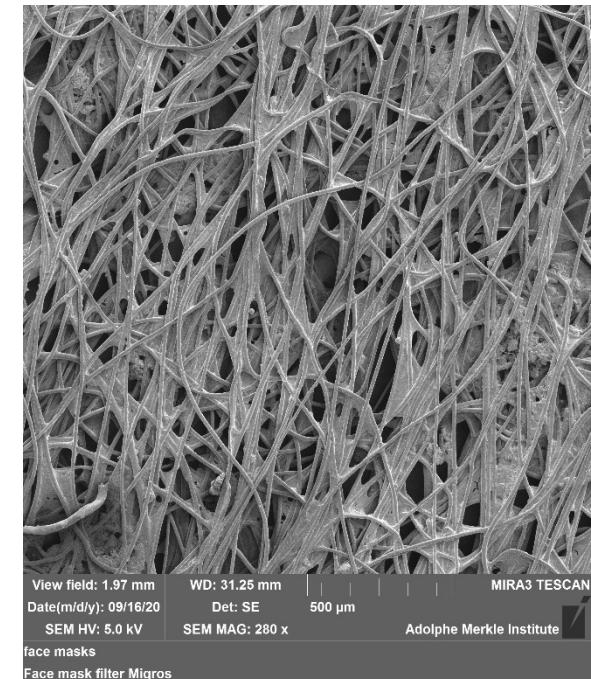
Layer 1



Layer 2



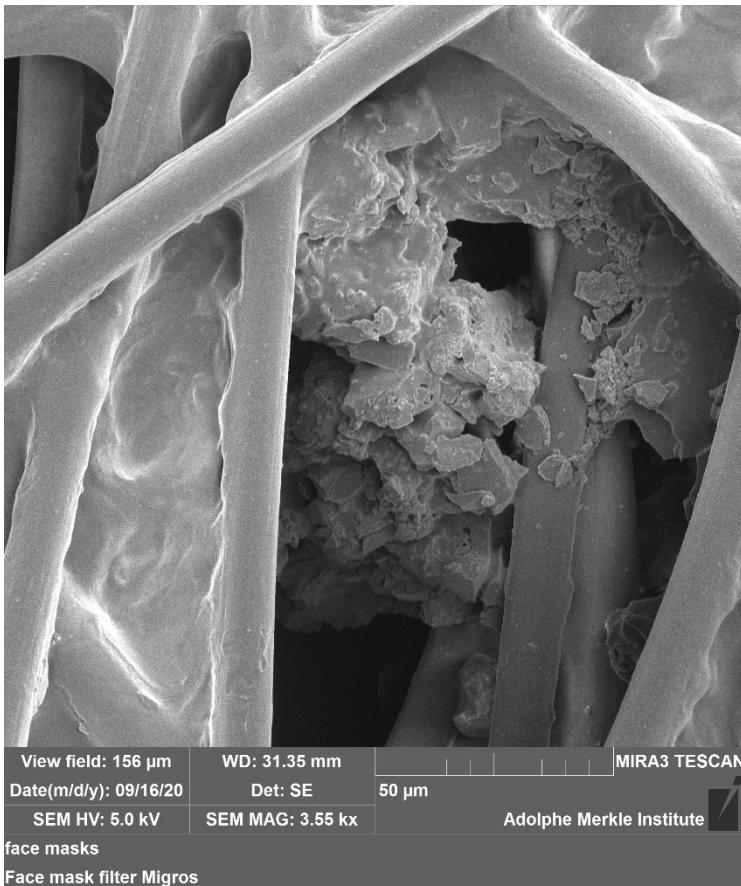
Layer 3



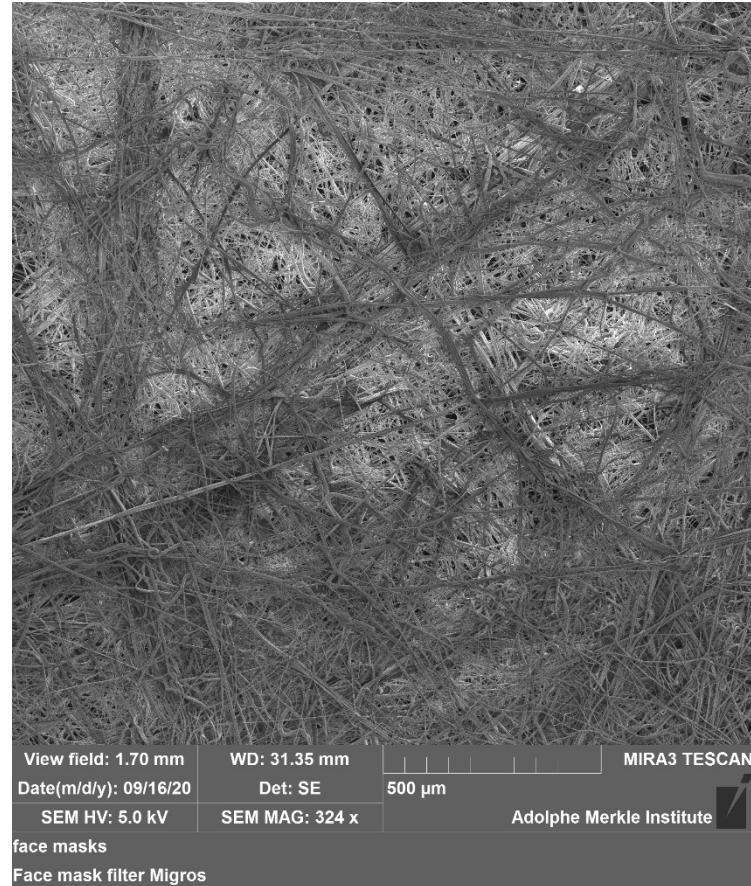
Active masks

5 Layered face mask

Layer 4



Layer 5



Active masks

Cotton? fibers



SEM HV: 3.1 kV

WD: 13.03 mm

View field: 570 µm

Det: In-Beam SE + SE 100 µm

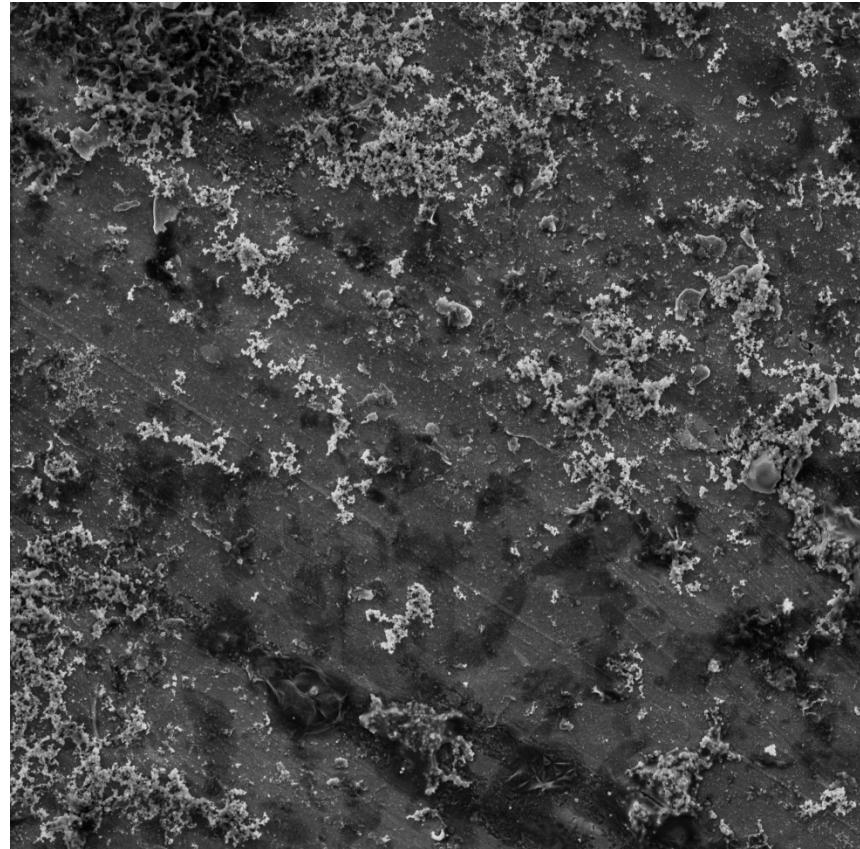
SEM MAG: 1.46 kx

Date(m/d/y): 08/18/20

MIRA3 TESCAN

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Nanomaterials?



SEM HV: 3.1 kV

WD: 13.08 mm

MIRA3 TESCAN

View field: 33.9 µm

Det: In-Beam SE + SE 10 µm

SEM MAG: 24.5 kx

Date(m/d/y): 08/18/20

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Potential leaching of nanomaterials

Graphene

Activated carbon

Glass fibers

Silver

Copper

Polymers



Our offer

Analysis of particles leached from face masks

- Size analysis (Electron microscopy, Scattering methods, Analytical centrifugation, Taylor dispersion analysis)
- Shape analysis (Electron microscopy)
- Chemical information (EDX analysis, Raman spectroscopy)



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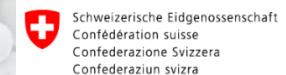
Adolphe Merkle Institut

Adolphe Merkle Stiftung

Universität Fribourg



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Umwelt



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Nanomaterialien, Regulation und Wissenstransfer