

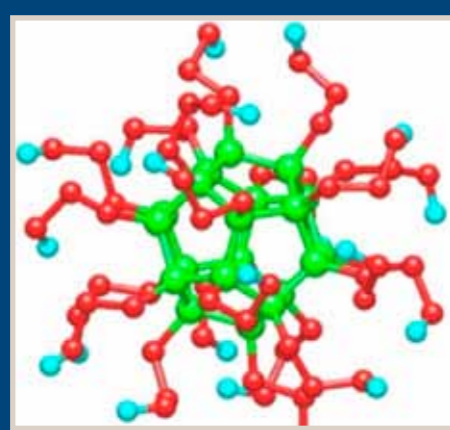
Surface modification of booms

To meet challenges concerning **cleaning of the boom surfaces** and **effective sorbent booms**, different surface modification methods are suggested in order to reduce surface adhesion and increase the absorption properties for light oils.

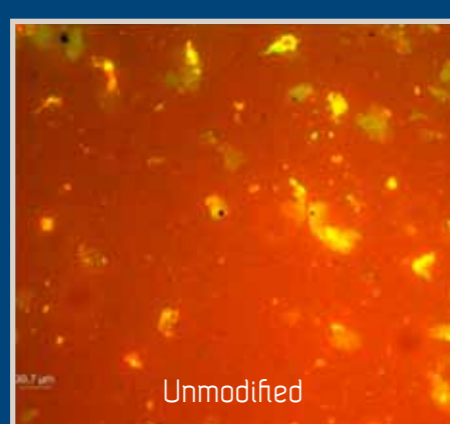
Reduce adhesion of oil to the boom and thereby ease the cleaning



- Methods: Surface modifications and coatings
- Hydrophilic surface properties of polymers used for booms
 - Low adhesion / low contact of oil phases
 - Easy-to-clean handling
- Surface treatment for tailoring materials properties
 - Decreased or increased wettability of booms
 - Wear and scratch resistance (avoid damages by ice)



Sorbent booms for light oils with low adhesion of larger compounds



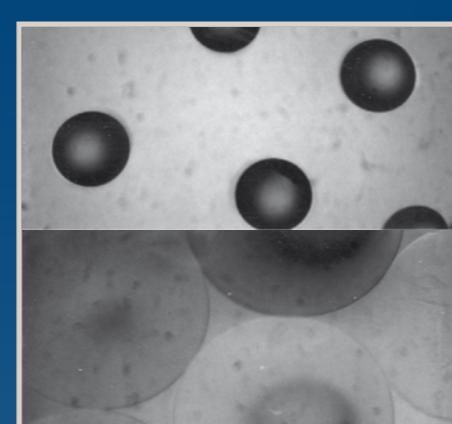
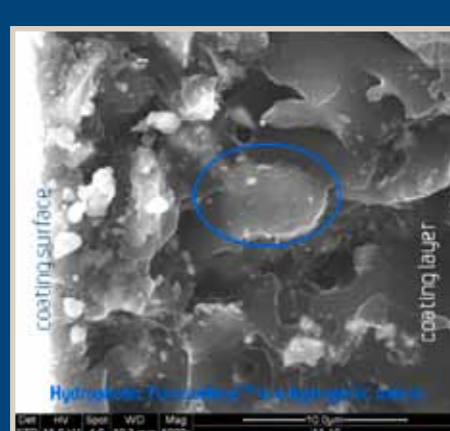
- Methods: Hydrophobic polymers
 - Porous materials with large absorbing surfaces
 - Swelling polymers
- Important: The outer surface of the booms have to be coated with hydrophilic polymers to prevent adhesion of emulsions and other compounds



Tools for materials modification



- Organic-inorganic hybrid polymers (FuzioNano™) with hydrophilic or hydrophobic properties
- Swelling of polymers and hybrid materials during absorption process
- Porous polymers and hydrophilic polymer coatings



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