

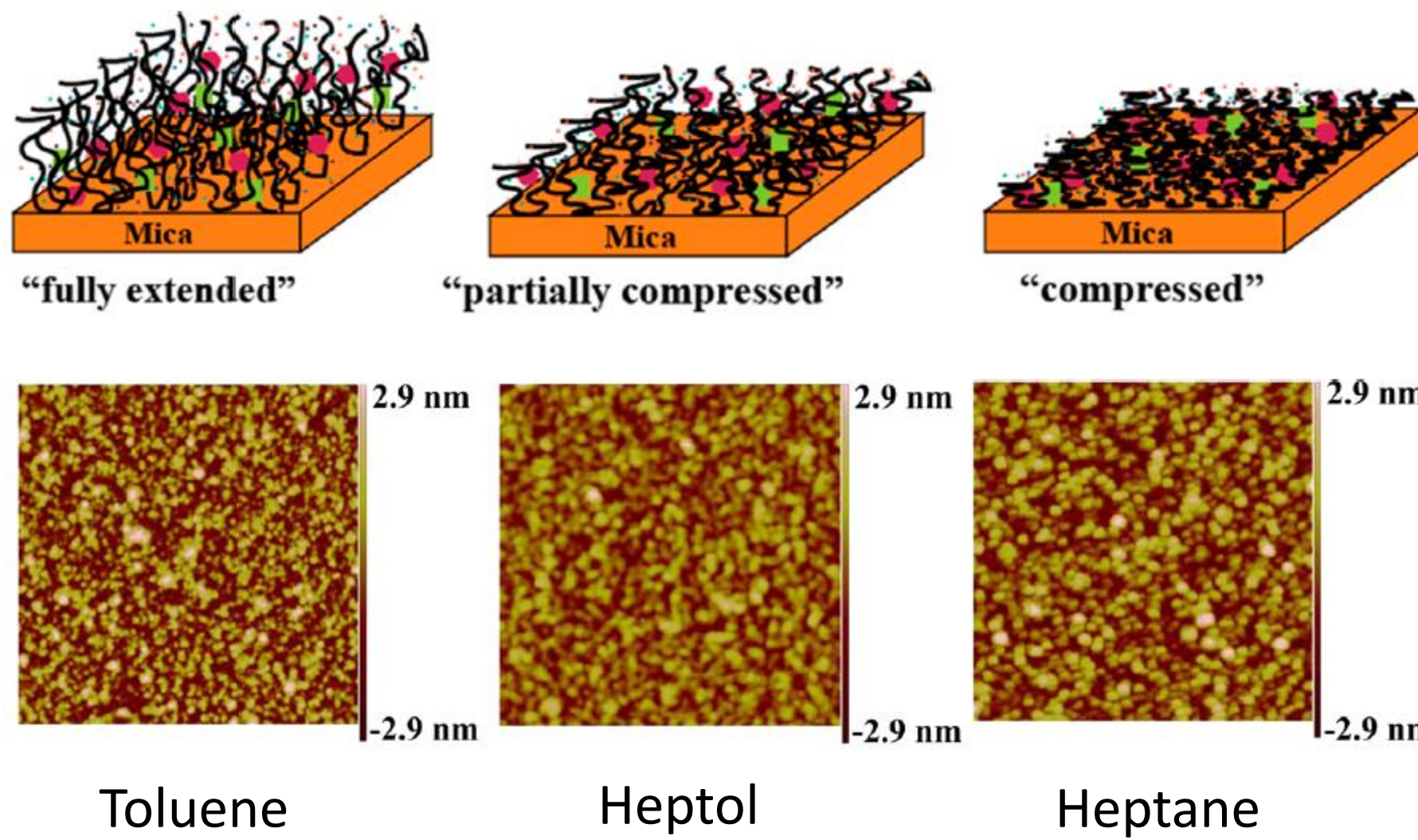


INTERFACIAL BEHAVIORS AND INTERACTION MECHANISMS OF ASPHALTENES

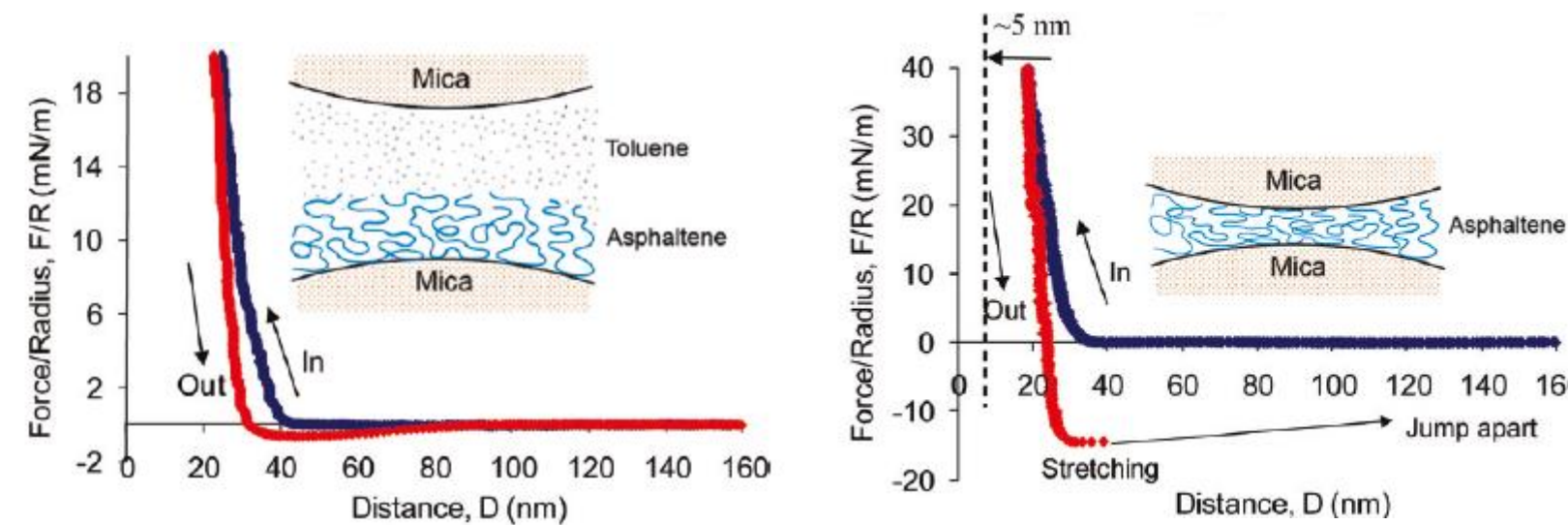
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ASPHALTENES INTERACTIONS IN ORGANIC SOLVENTS

Conformational change of asphaltenes surfaces in different organic solvents *Langmuir* 2016, 32, 4886–4895



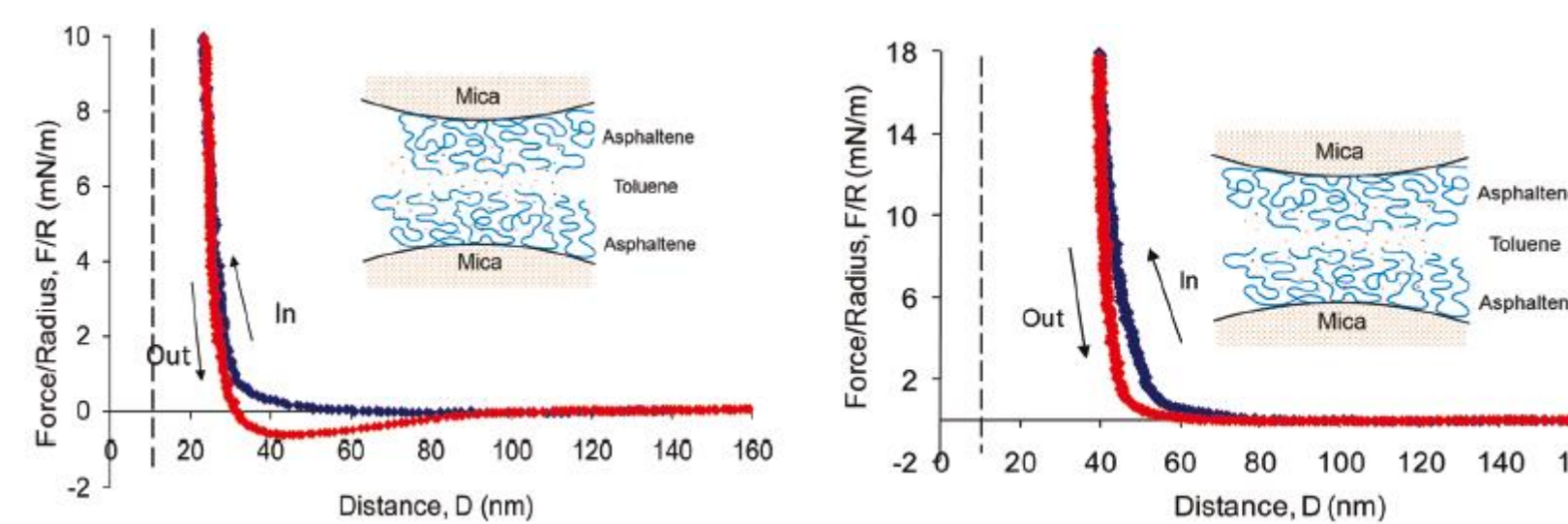
One layer



exposed in toluene for ~1 h

in contact with mica surface for about 10 min before separation

Two layers



immediately after toluene injection

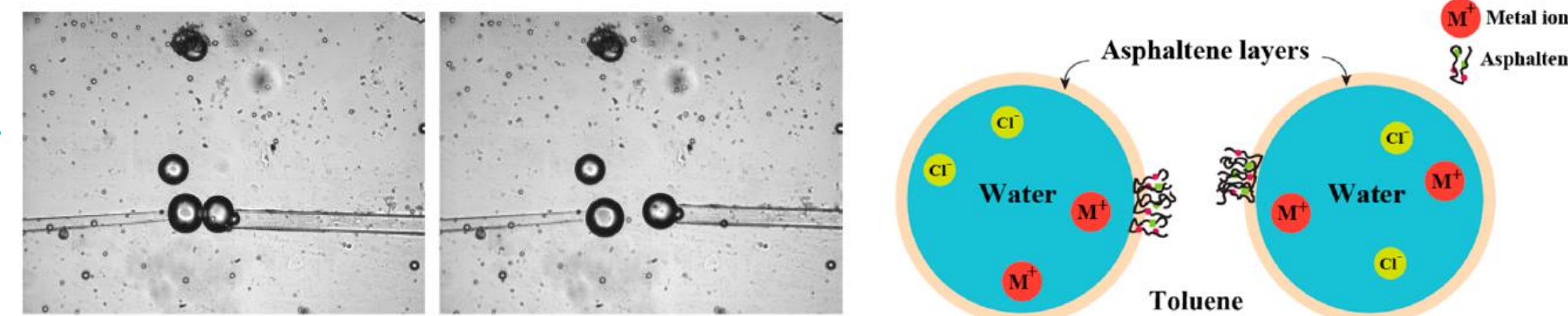
in toluene after 30 min

J. Phys. Chem. C 2011, 115, 16043–16051

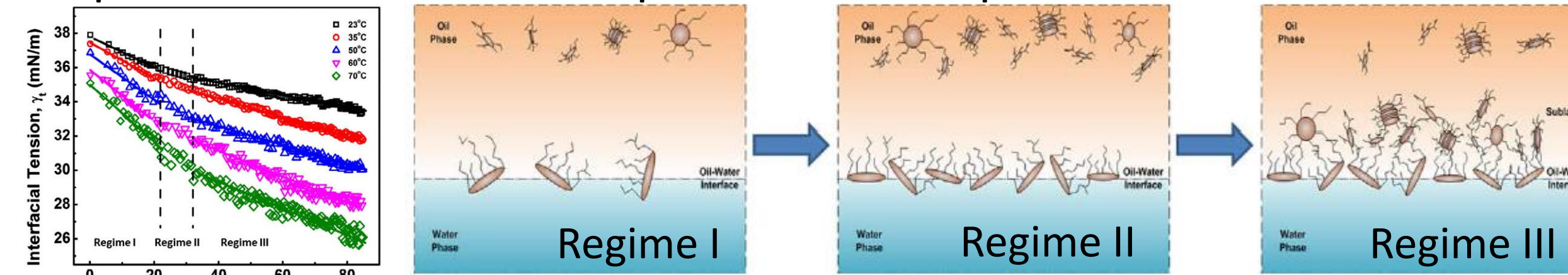
ASPHALTENES AT OIL/WATER INTERFACES

Water-in-oil (W/O) emulsion droplets with interfacial asphaltenes

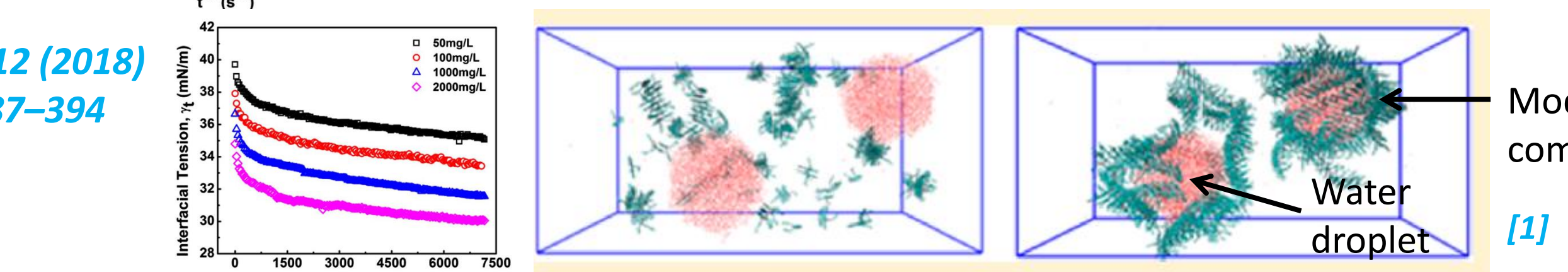
Langmuir 2016, 32, 4886–4895



Dynamic interfacial tension (DIFT) of oil/water interface with asphaltenes: effects of temperature and asphaltene concentration

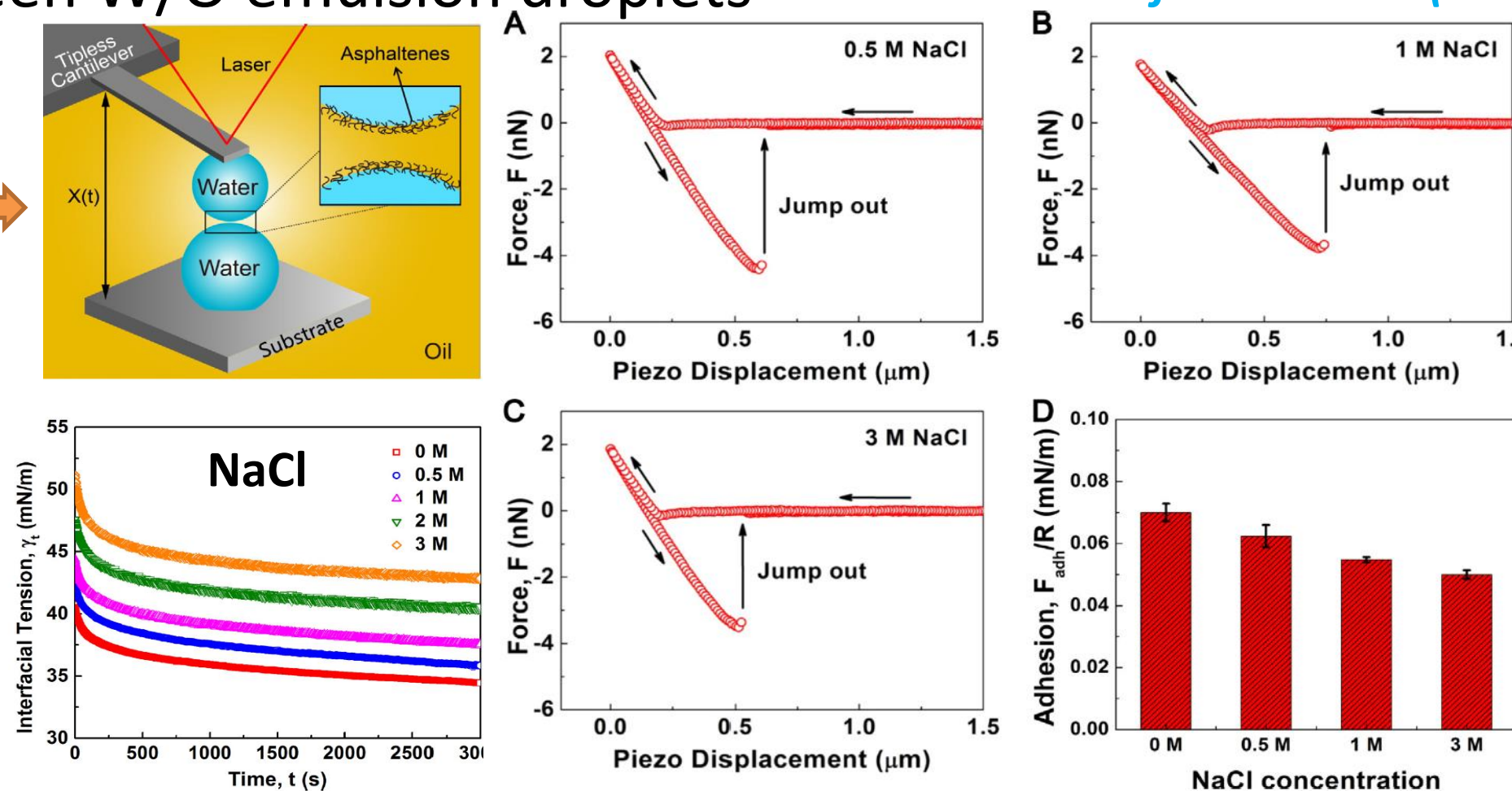


Fuel 212 (2018) 387–394



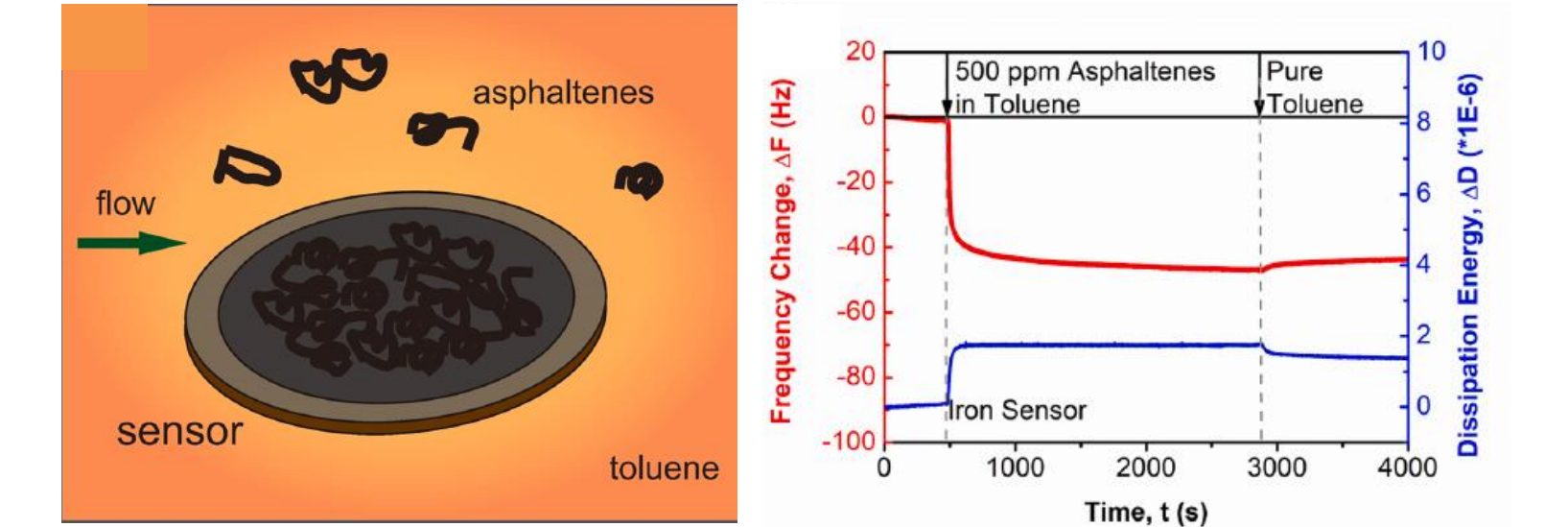
Effects of salinity on DIFT (with asphaltenes) and the interaction forces between W/O emulsion droplets *J. Colloid Interface Sci.* 553 (2019) 341–349

Droplet probe AFM



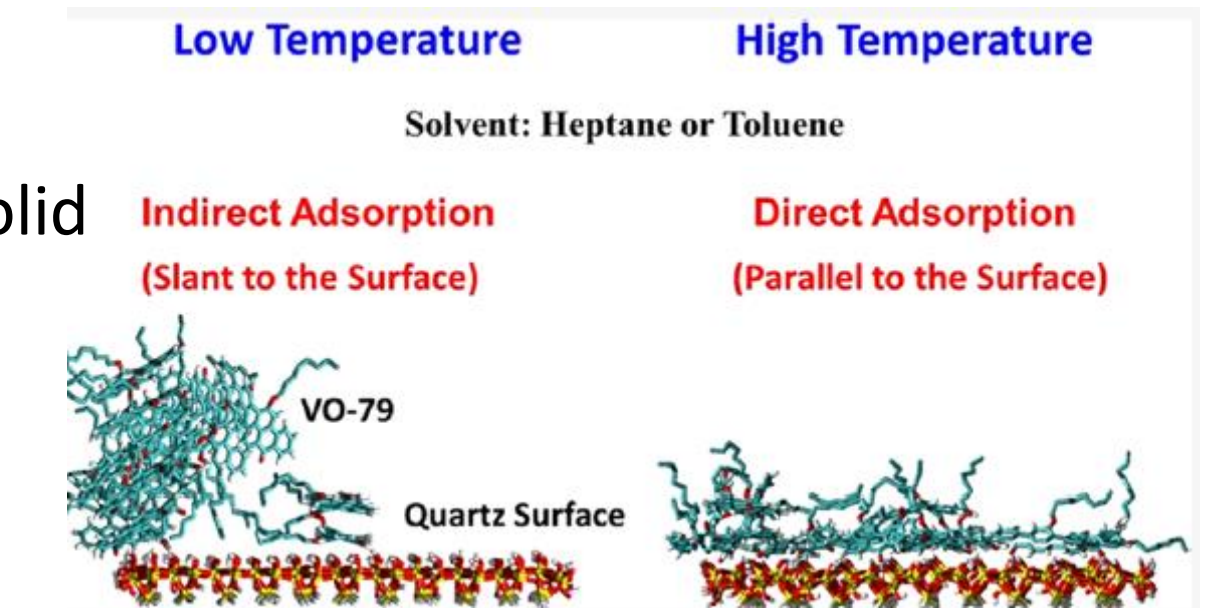
ASPHALTENES AT OIL/SOLID INTERFACES

Adsorption of asphaltenes on QCMD sensor [2]

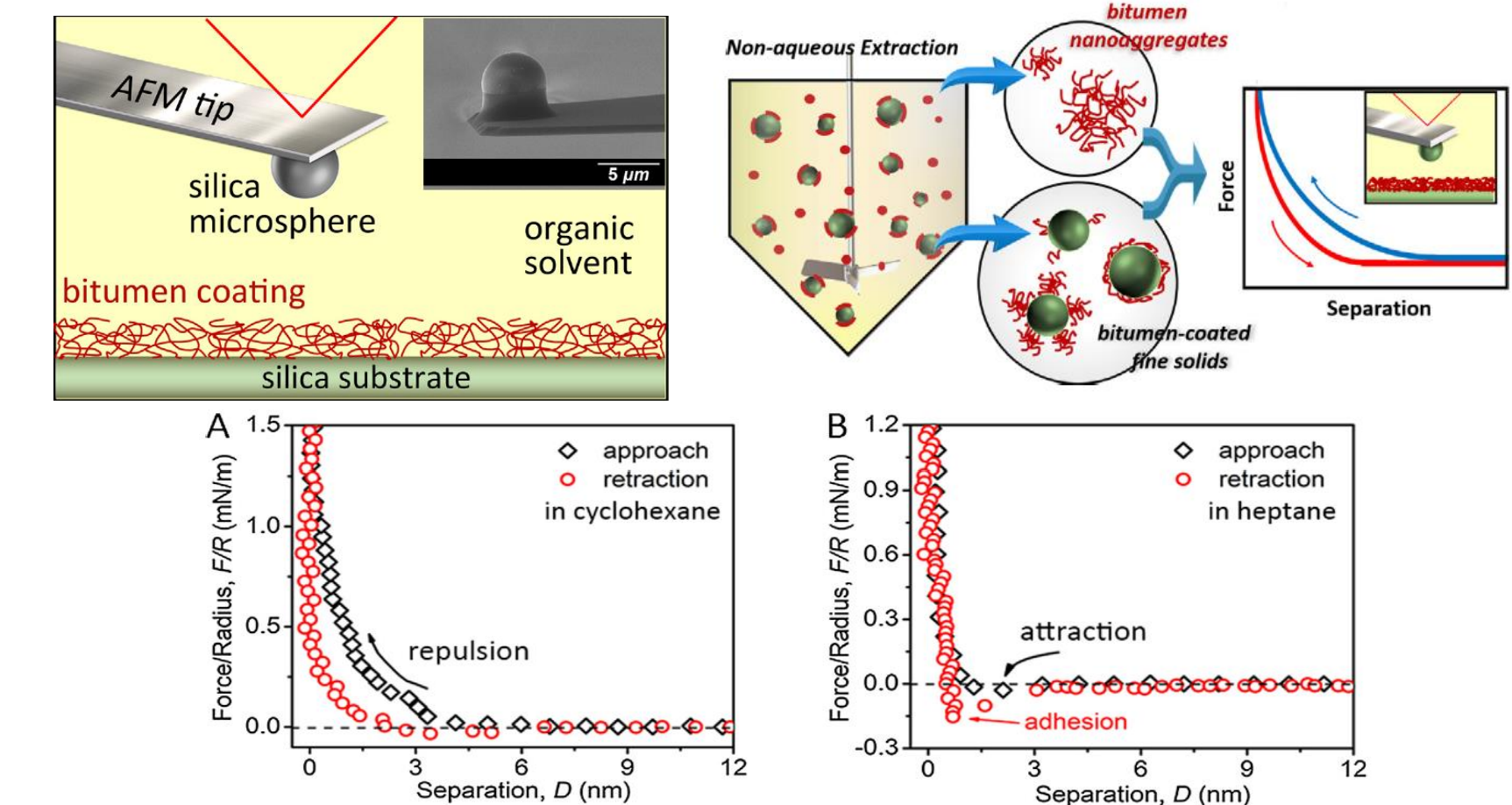


Simulated model compounds on solid minerals

Ind. Eng. Chem. Res. 2020, 59, 18500–18509



Interaction forces between bitumen and minerals [3]



BIBLIOGRAPHY

- J. Phys. Chem. C* 2017, 121, 10382–10391
- Fuel* 290 (2021) 120008
- Fuel* 242 (2019) 255–264