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Aerosol and cloud droplet residue composition and size distributions

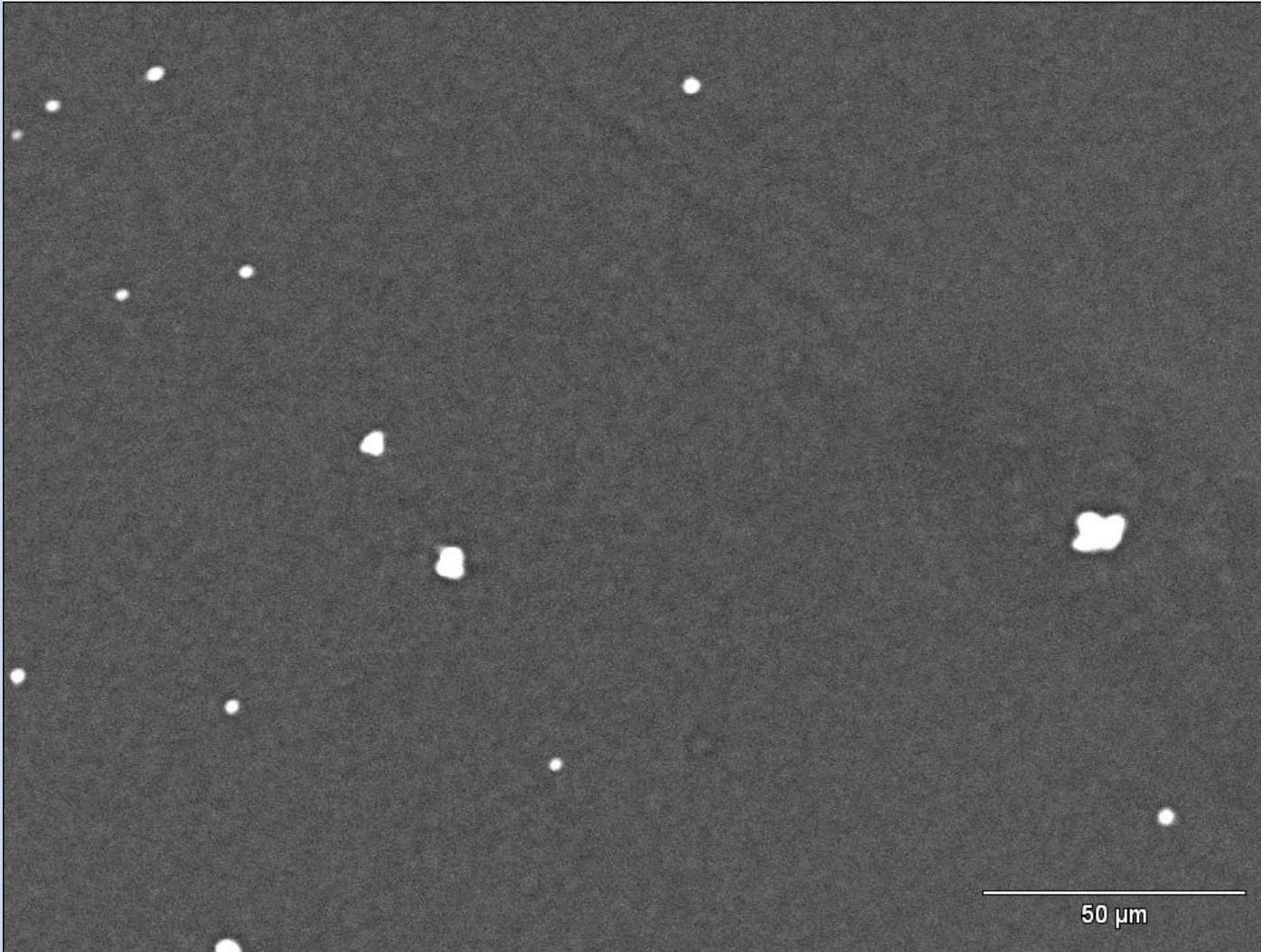
GNI slides from POC in RF7
CVI samples from polluted area in
RF12

GNI slide analysis by automated SEM

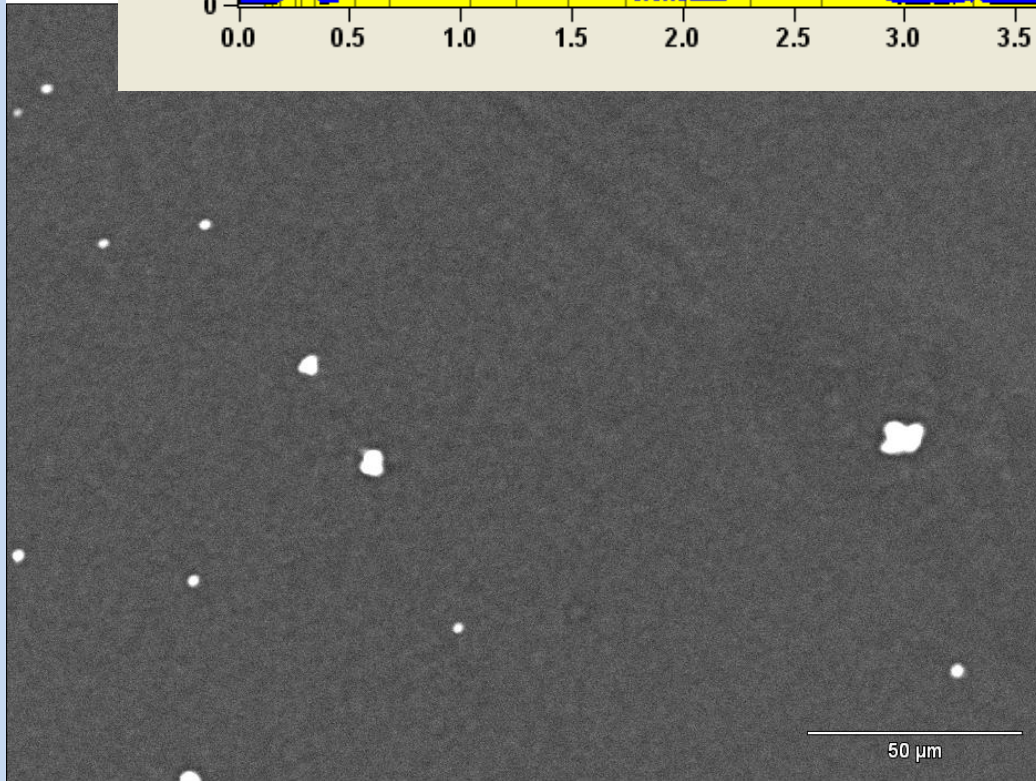
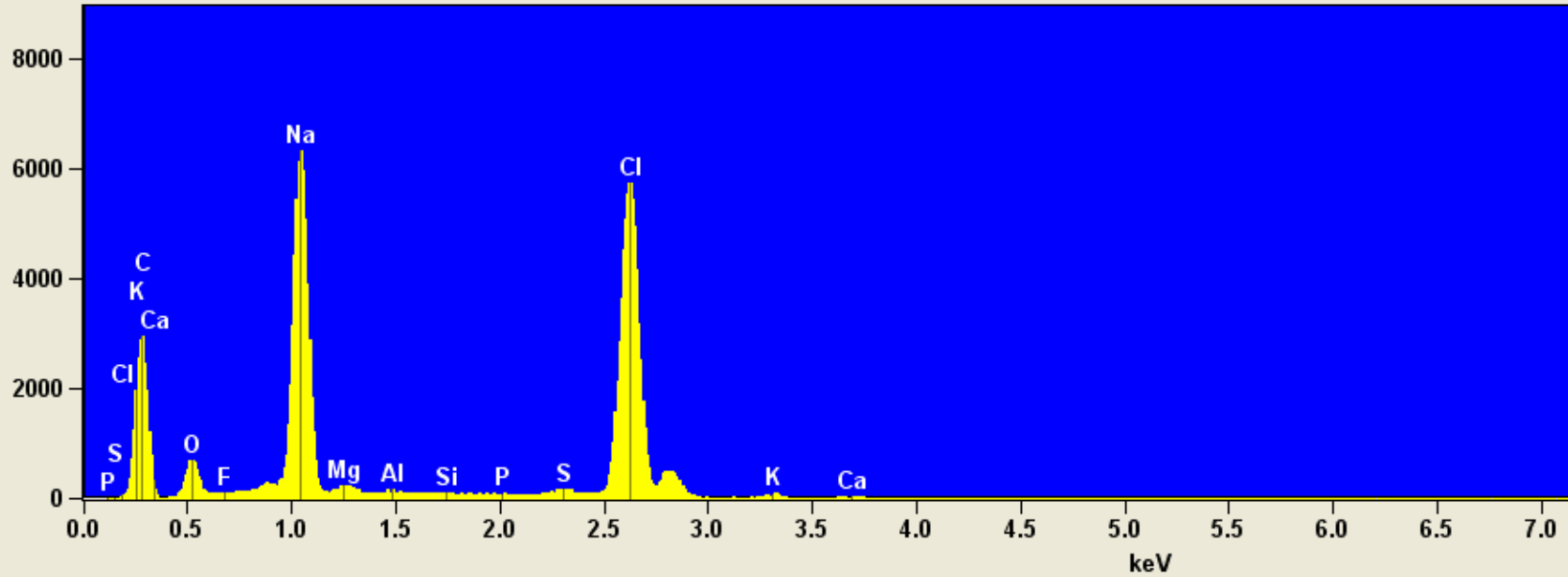
VOC-RF7-GNIa19[VOC-RF7-GNIa19]



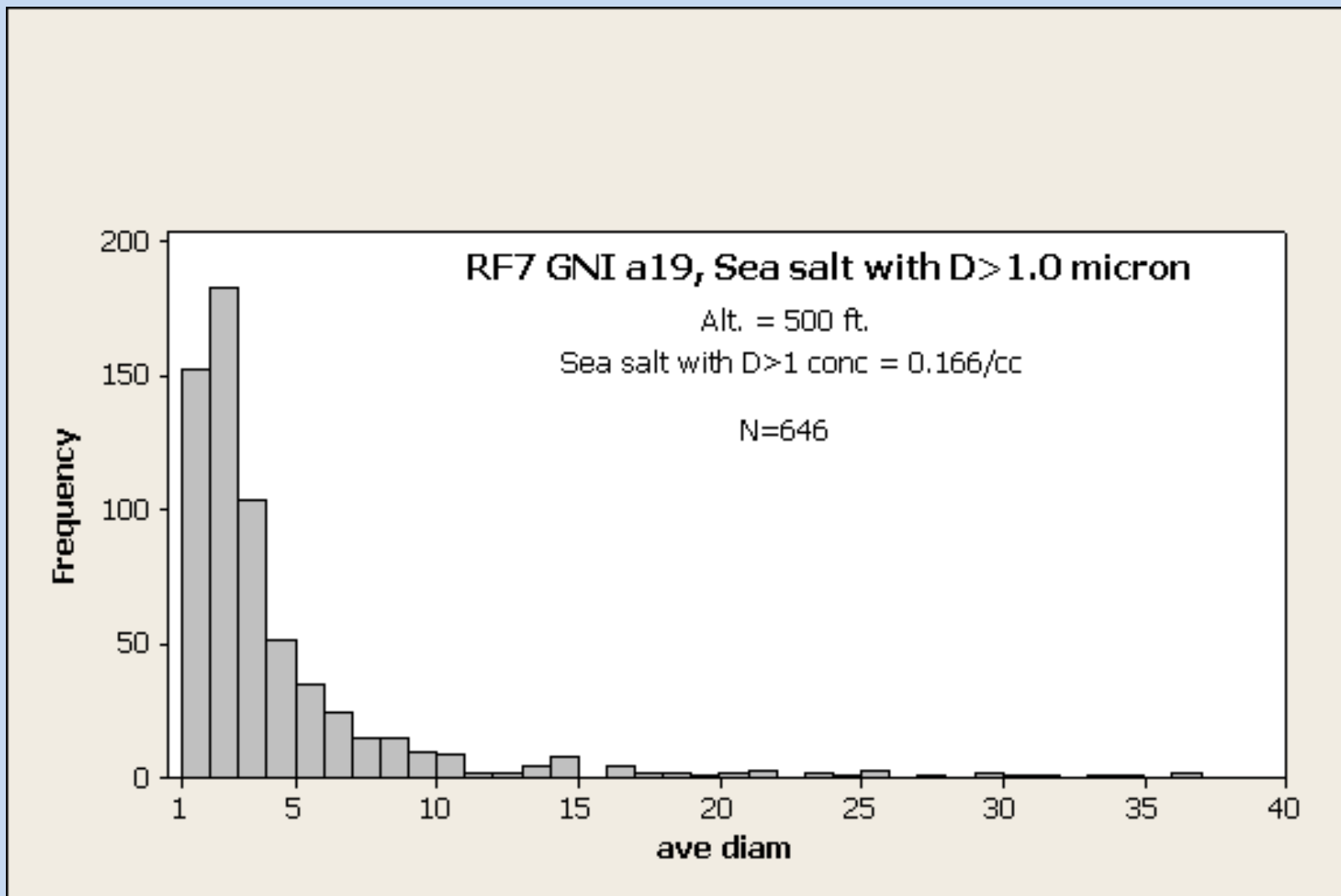
18.2 s
sampling time

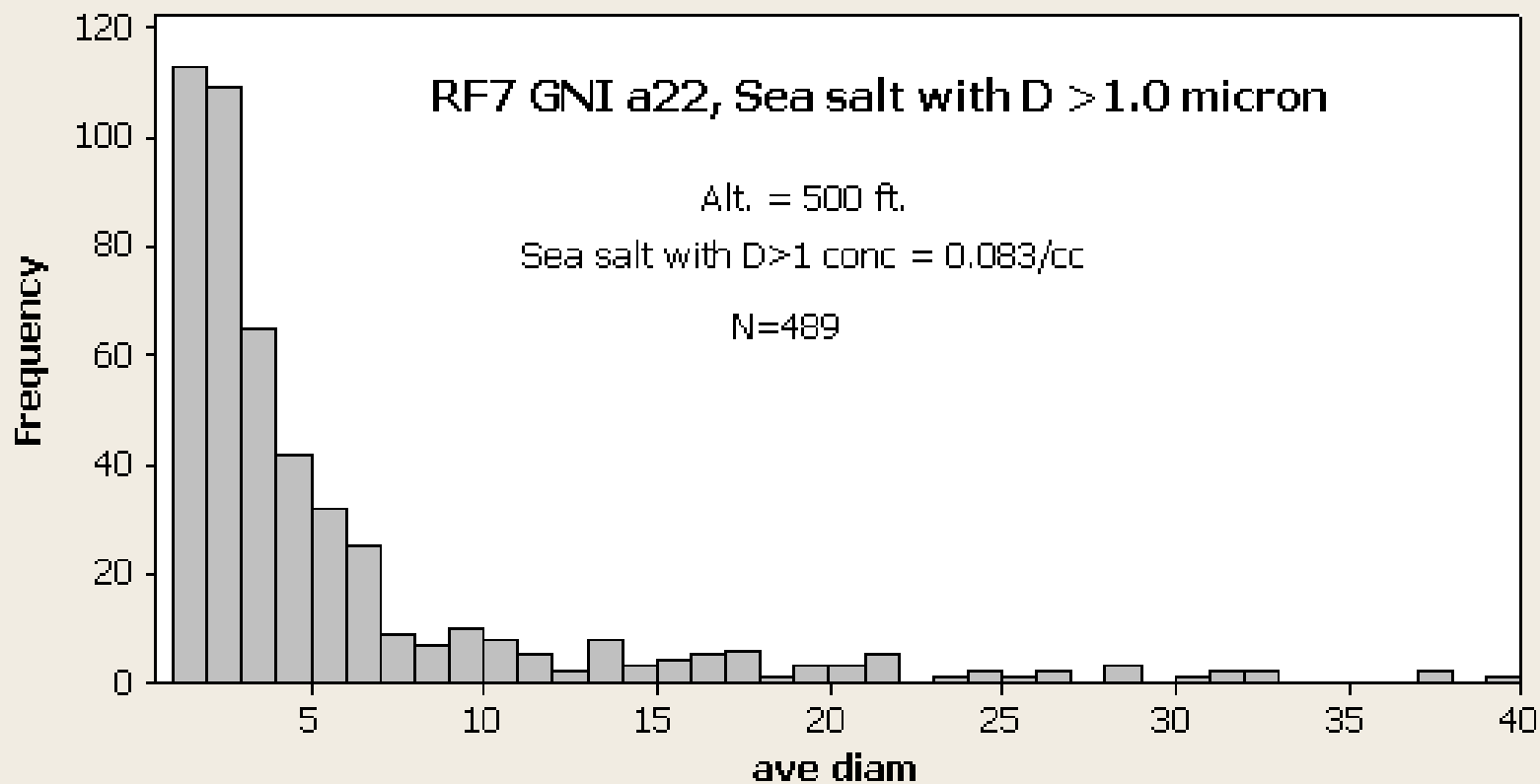


Accelerating Voltage: 15.0 kV Magnification: 500
1



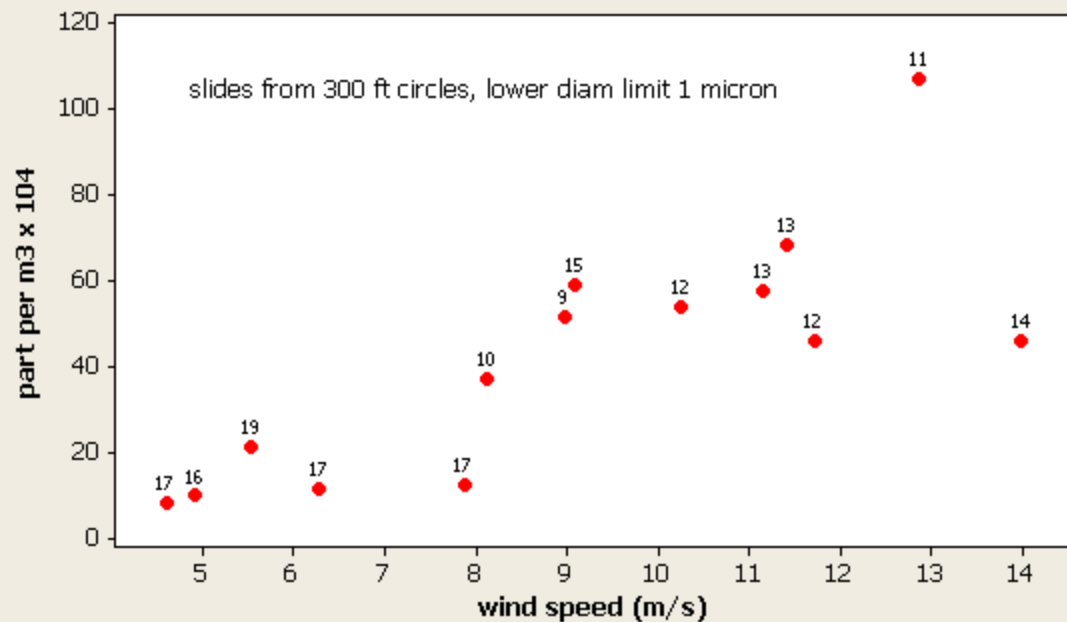
RF7 POC, Giant Nuclei Impactor results





RICO summary of 300 ft legs GNI

slides from 300 ft circles, lower diam limit 1 micron

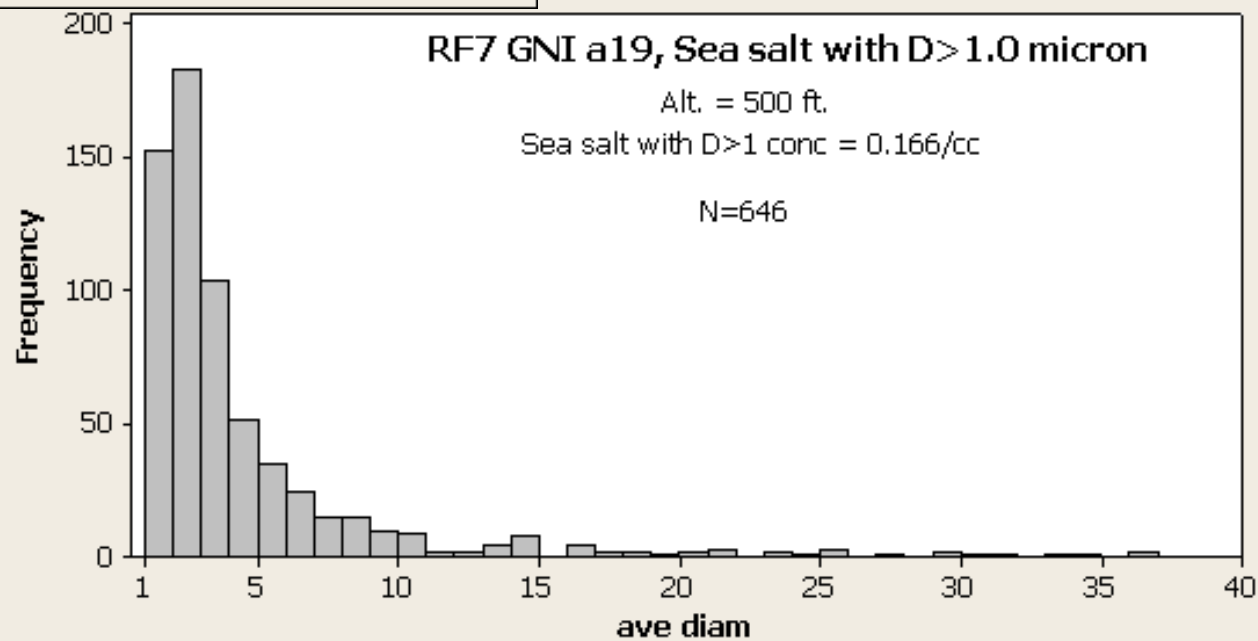


RF7 GNI a19, Sea salt with D > 1.0 micron

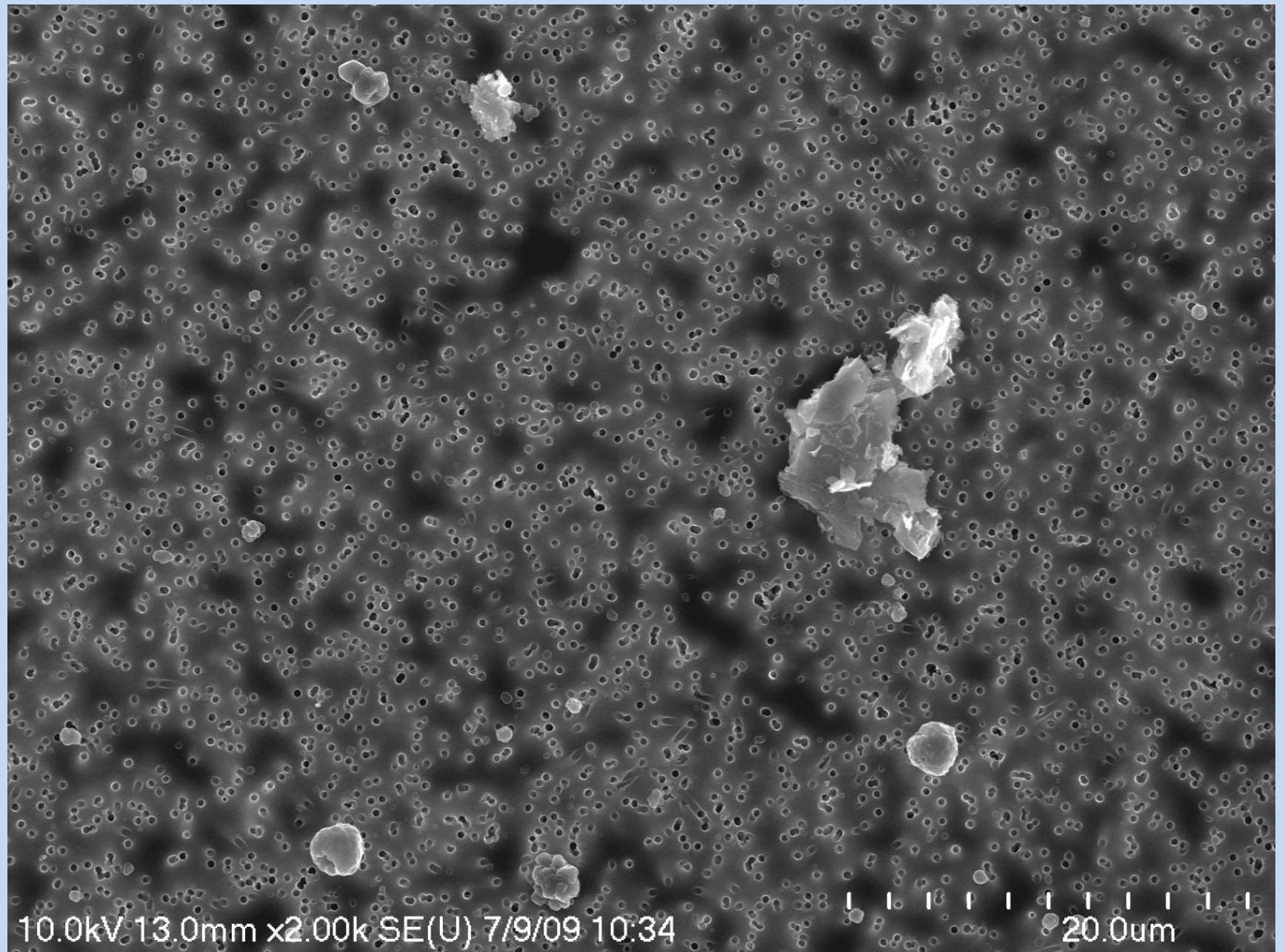
Alt. = 500 ft.

Sea salt with D > 1 conc = 0.166/cc

N=646



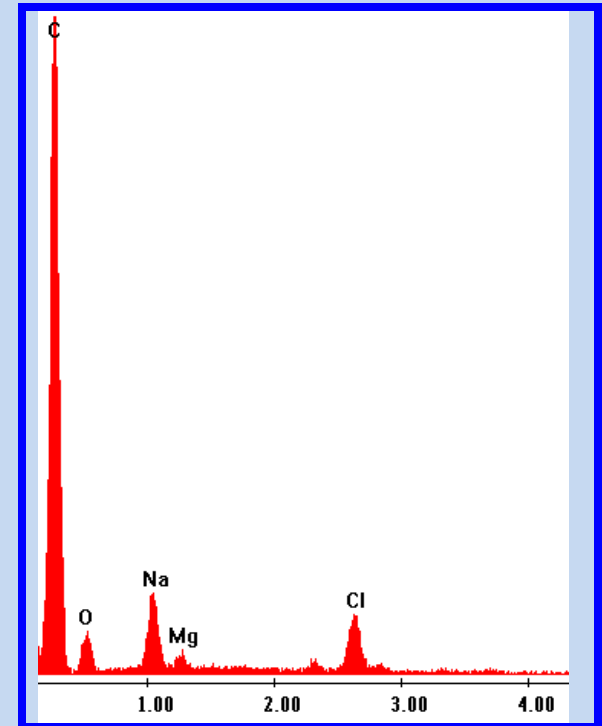
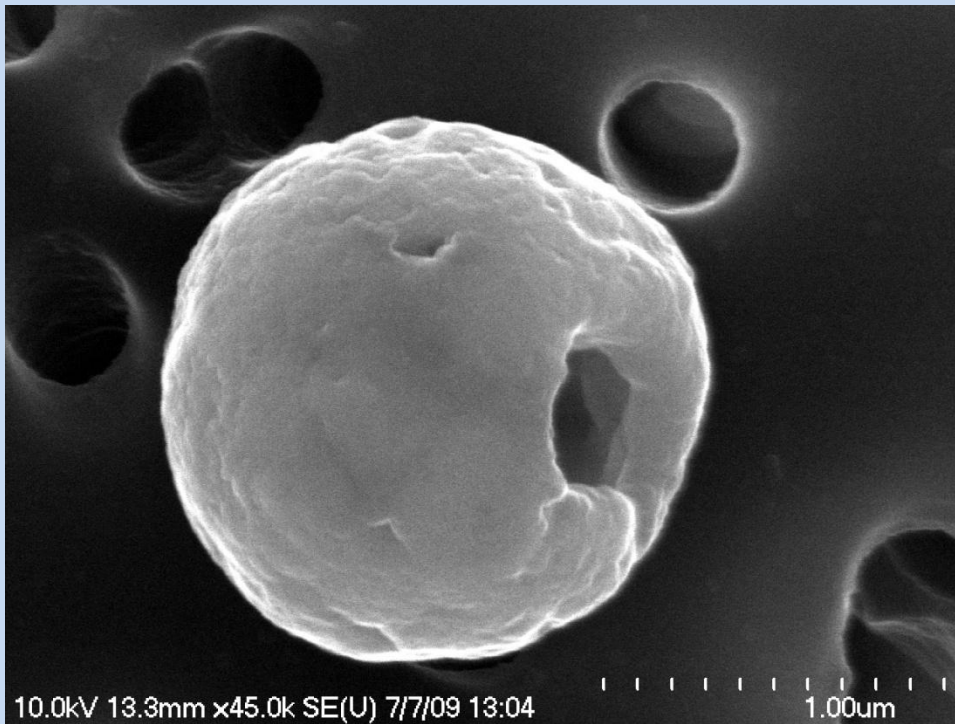
FEG SEM imaging of CVI samples
from polluted clouds during RF12



10.0kV 13.0mm x2.00k SE(U) 7/9/09 10:34

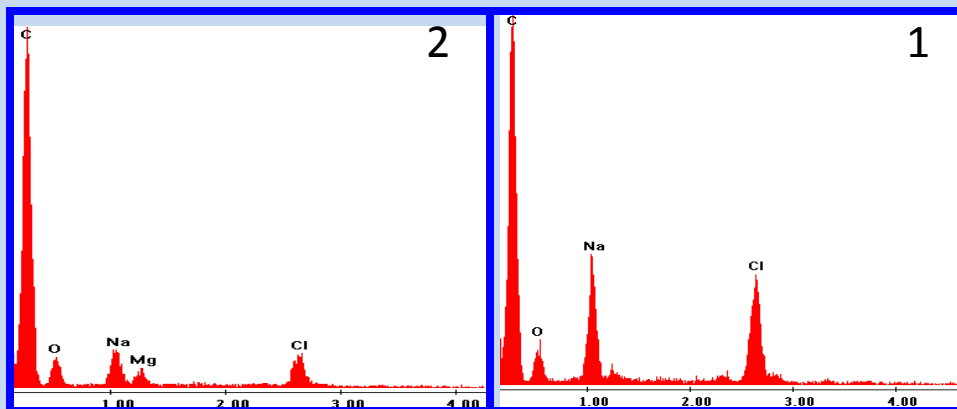
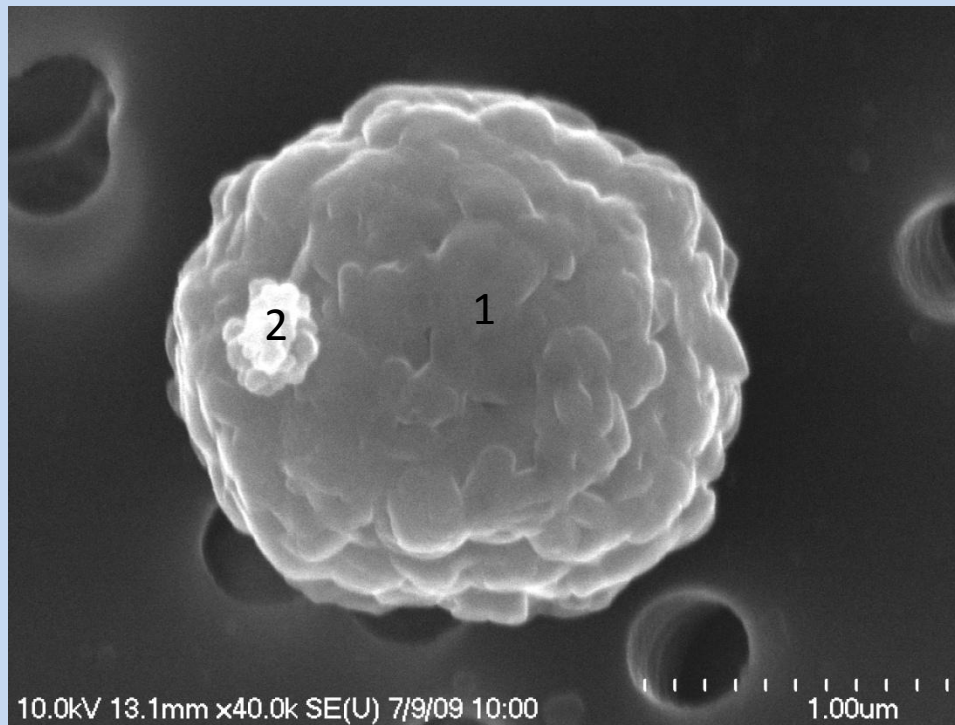
20.0um

Vocals RF12-CS1 (X2000 image-2)

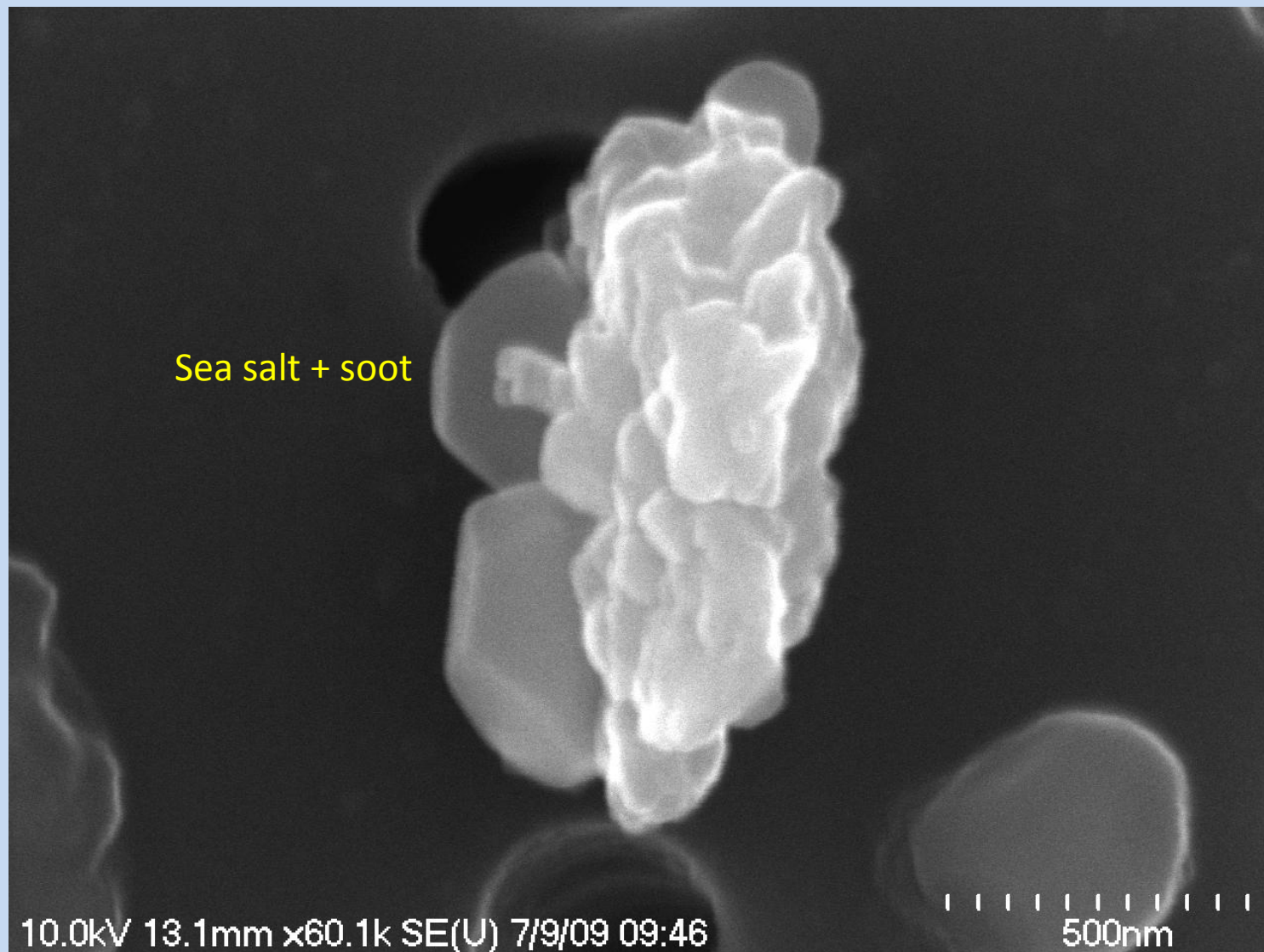


Vocals RF12-CS2

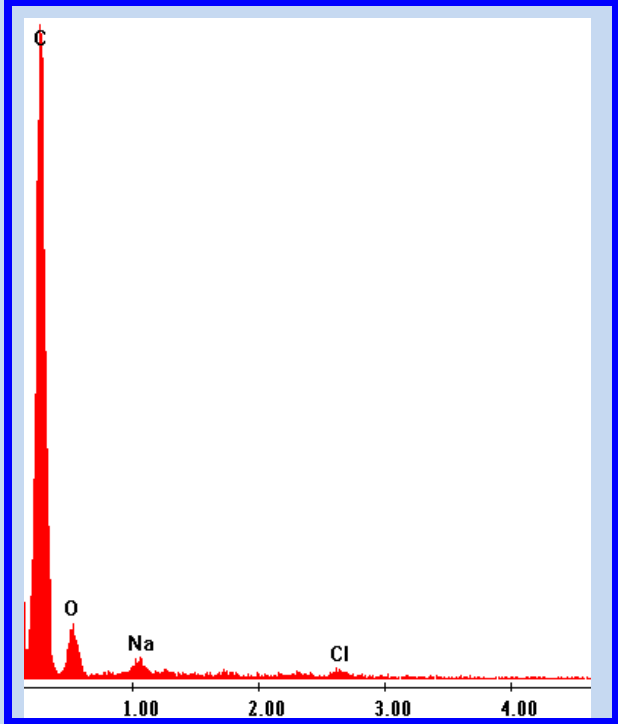
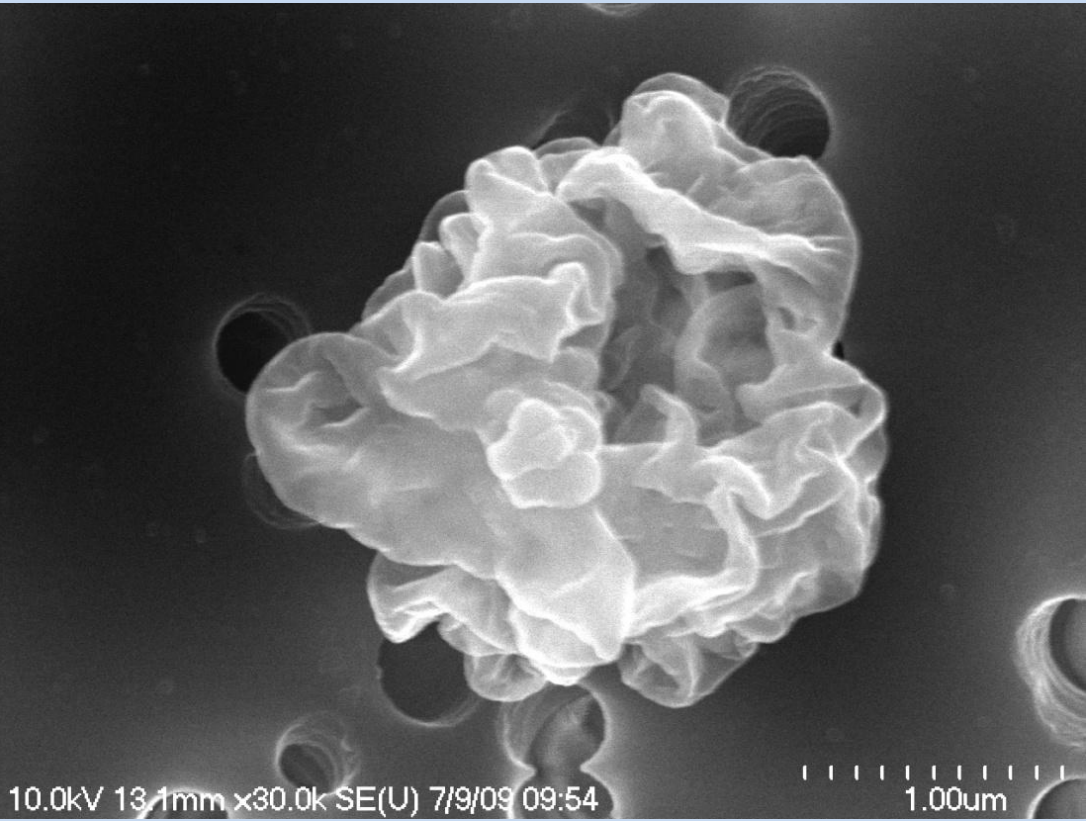
Sea salt +
small soot



Vocals RF12-CS2

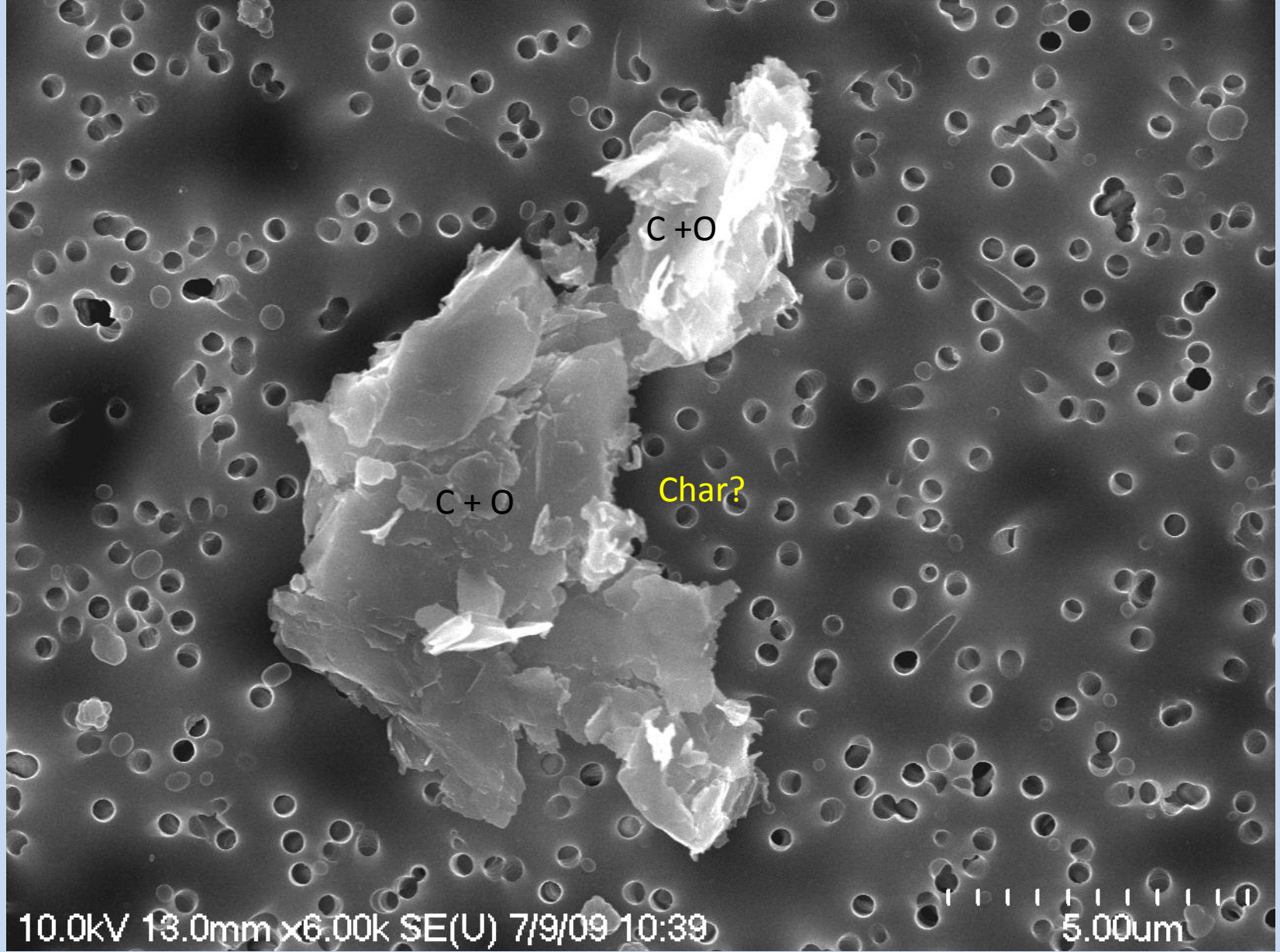


Vocals RF12-CS2

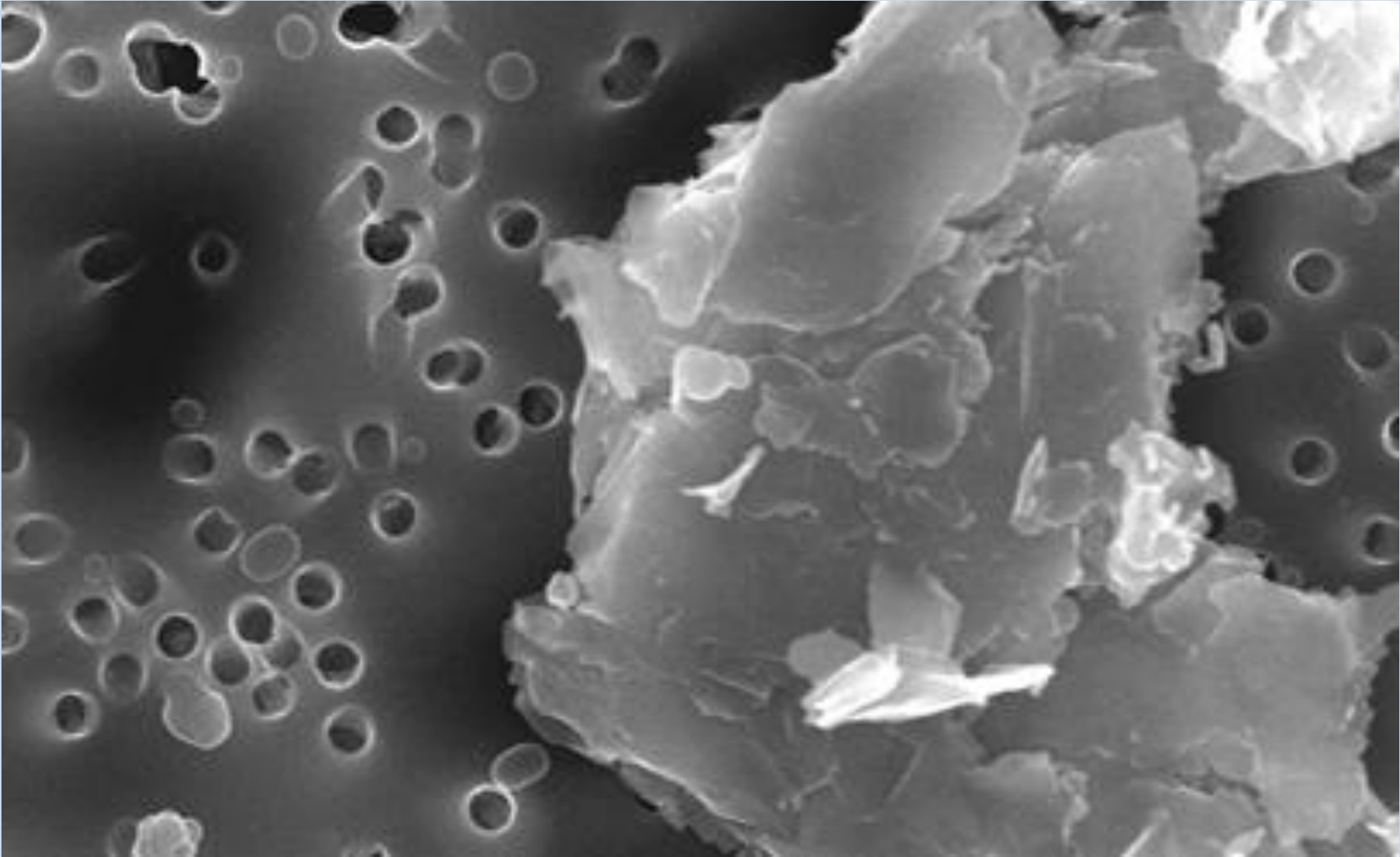


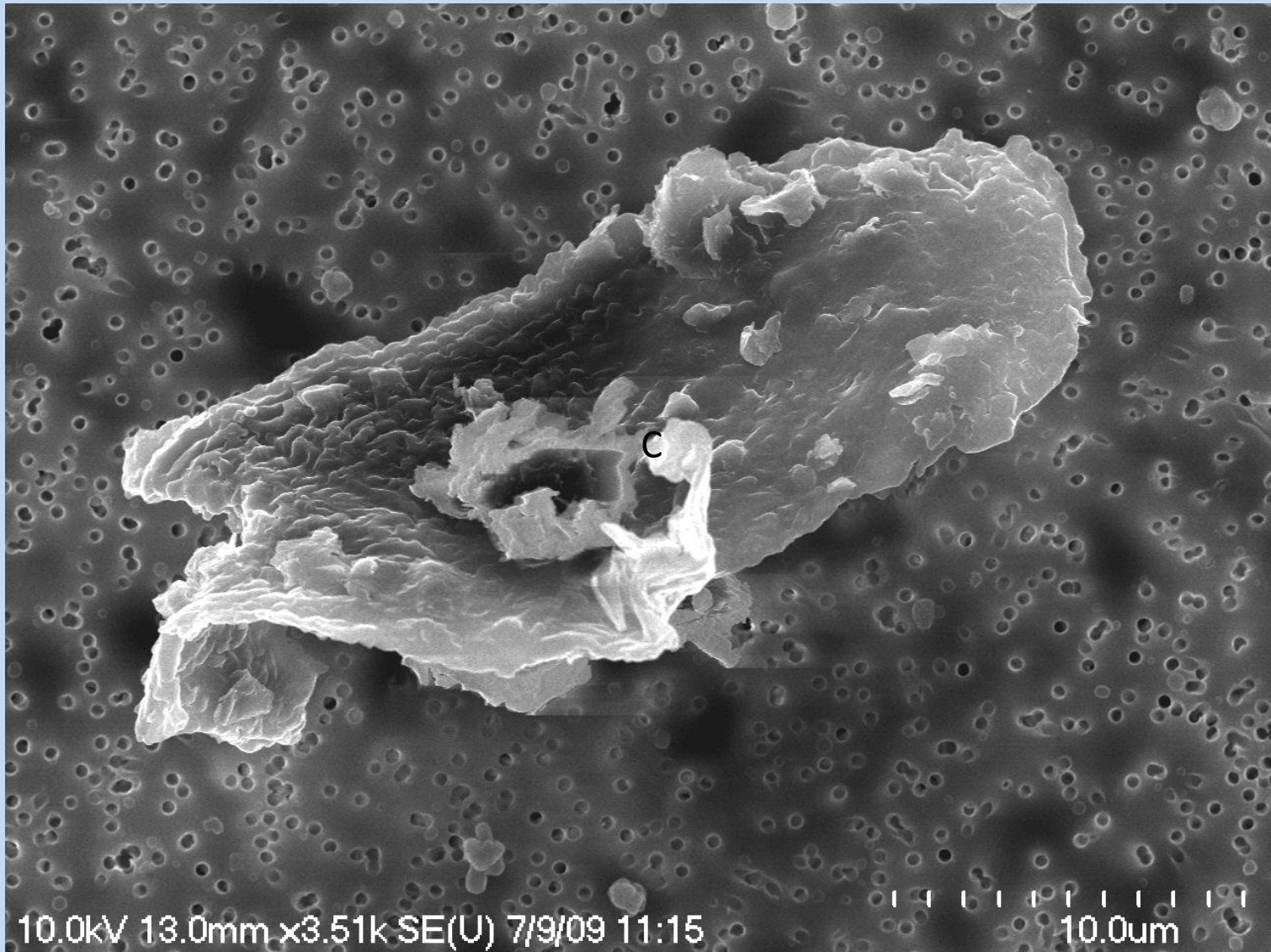
Biogenic? + small soot

Vocals RF12-CS2 particle

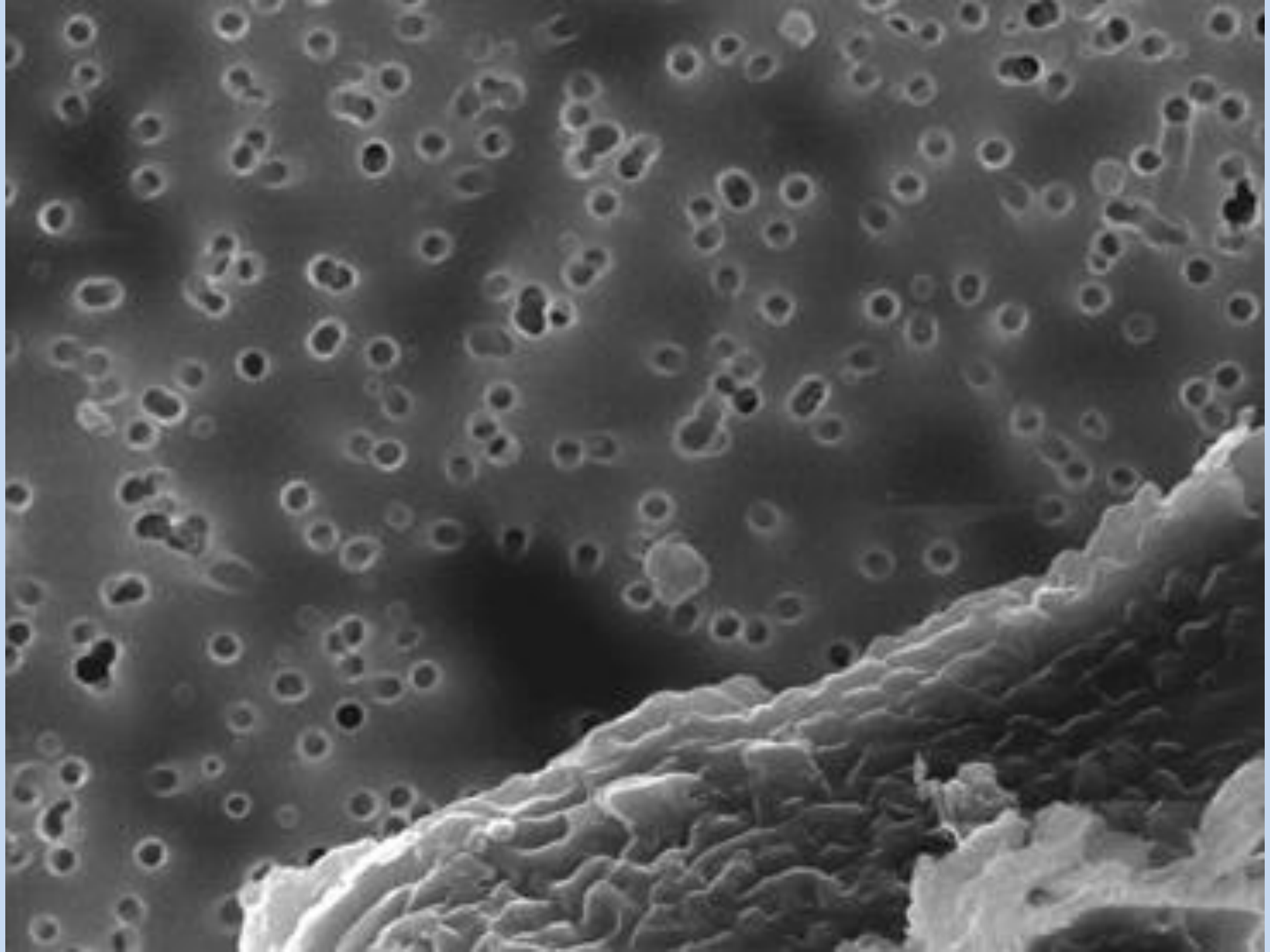


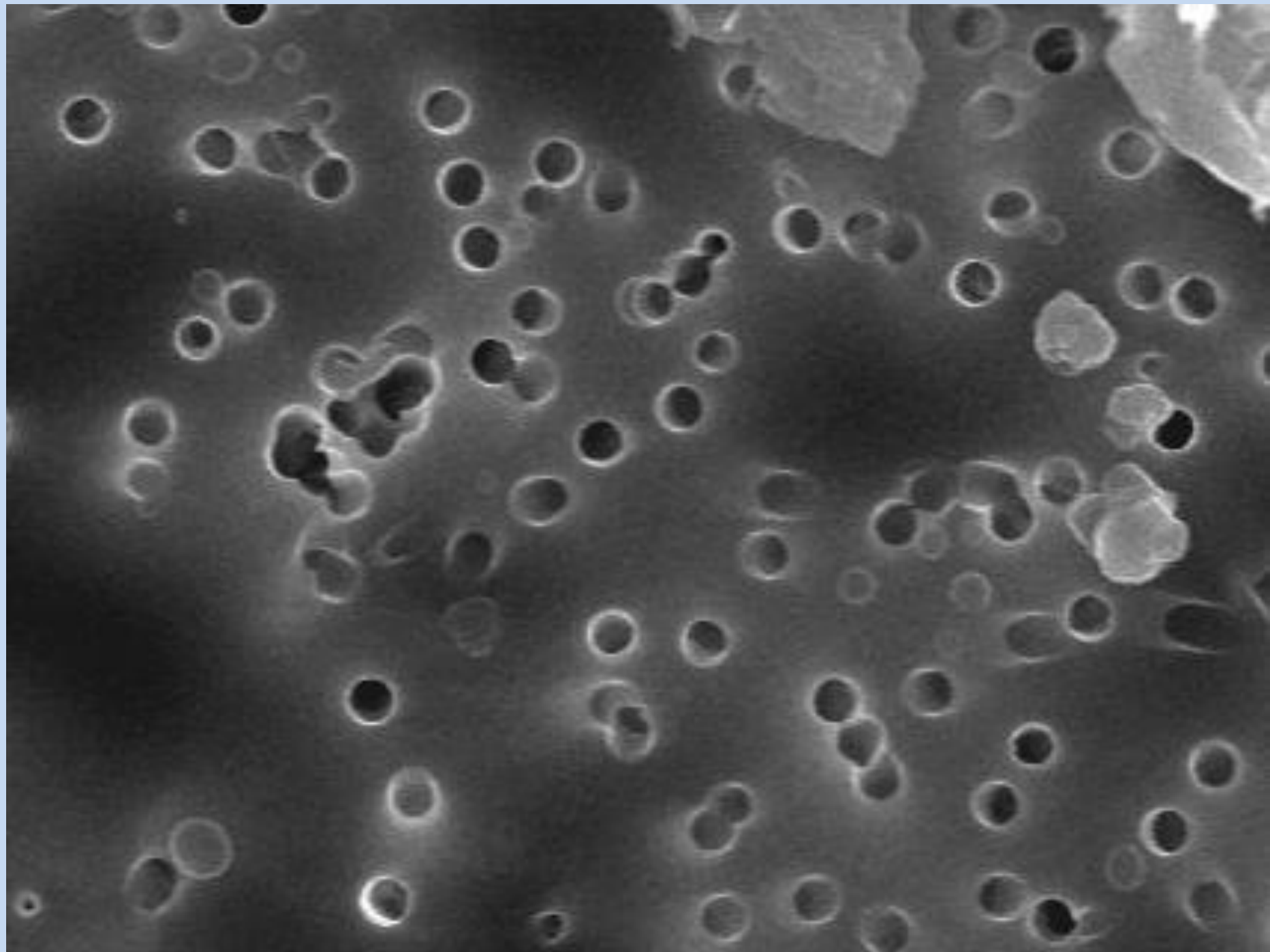
Vocals RF12-CS1

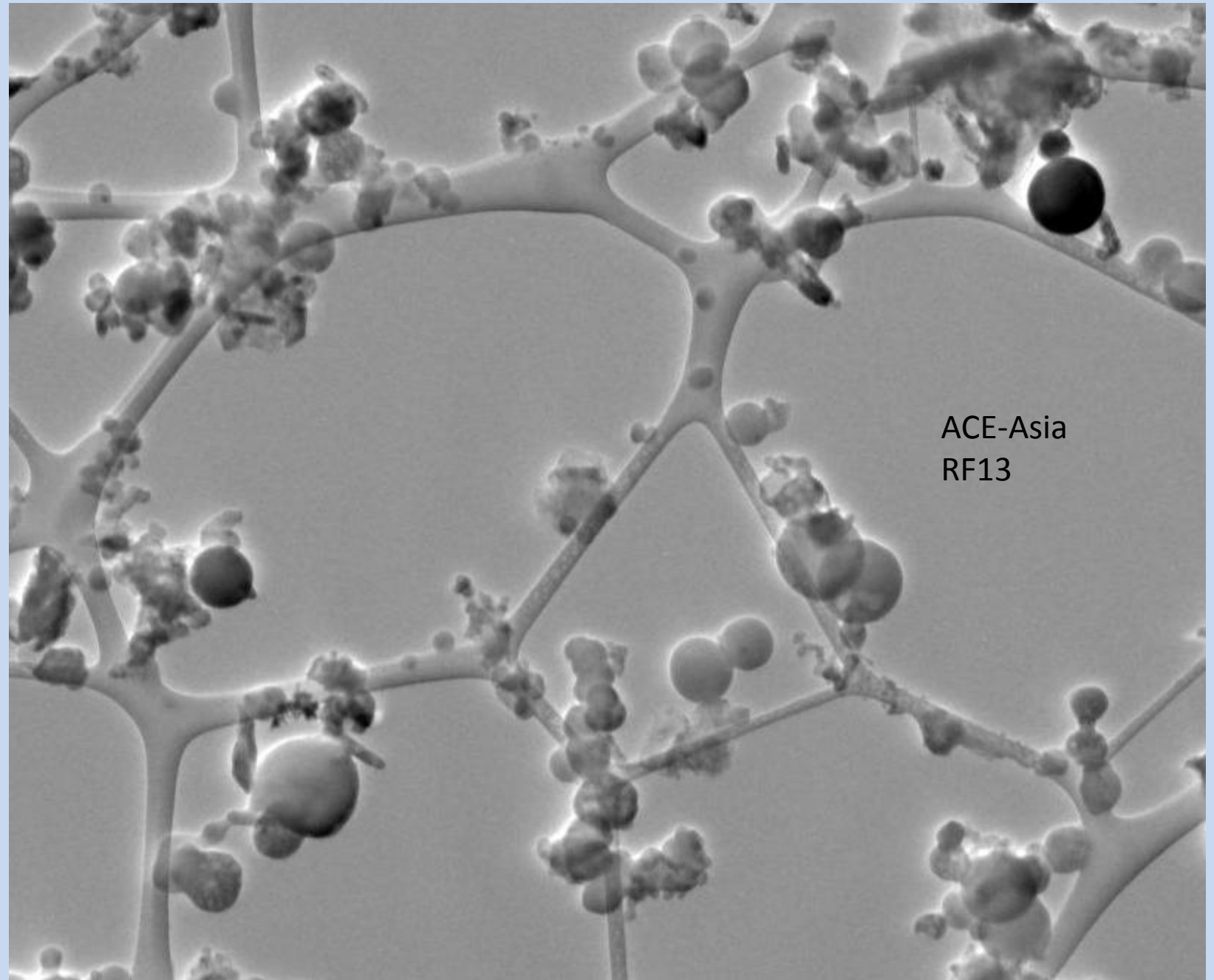




Particle in polluted Vocals RF12-CS1

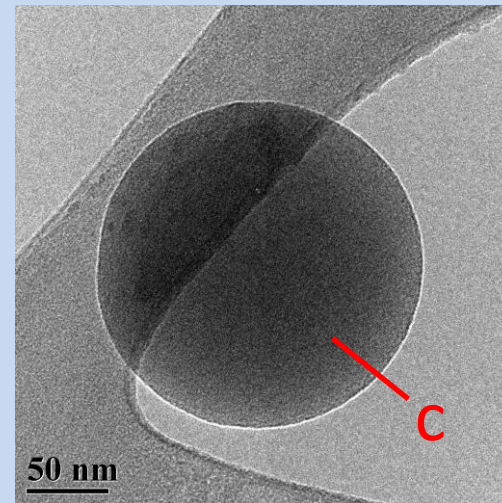
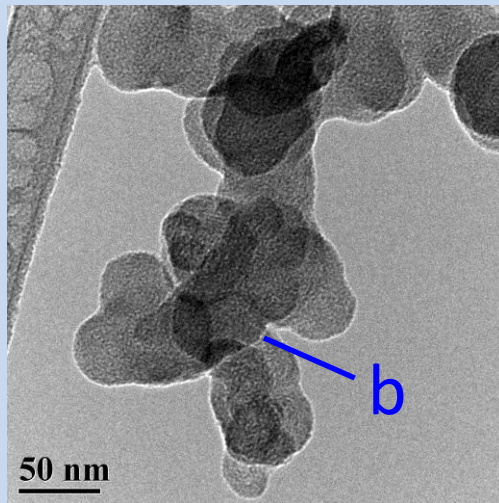
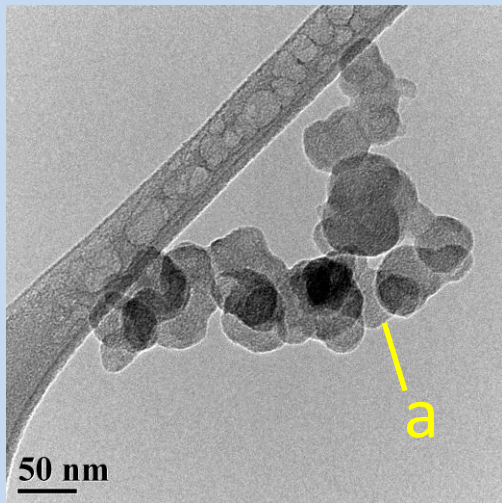




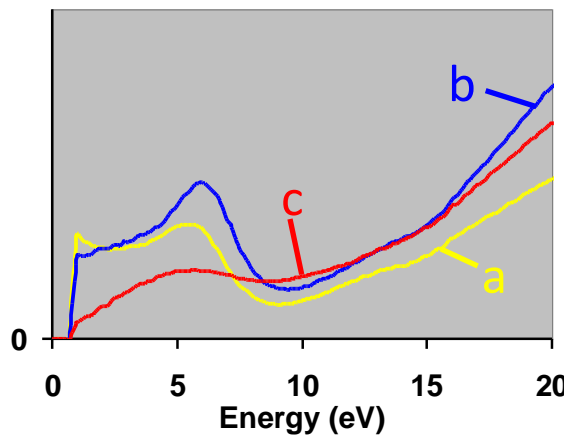


ACE-Asia
RF13

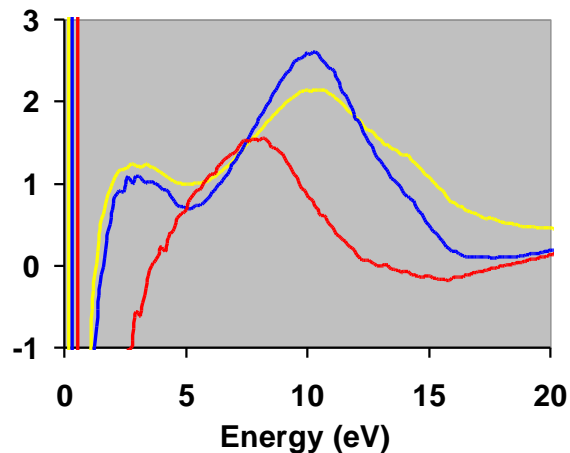
ACE-Asia ambient aerosols



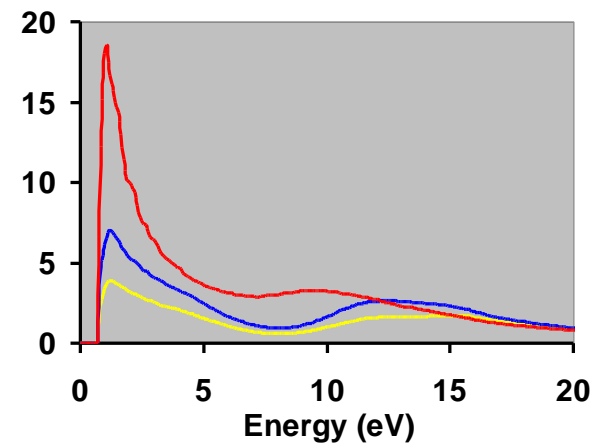
Single scattering spectra



Real dielectric ϵ'



Imaginary dielectric ϵ''



- Particle c shows very different dielectric properties in 1 – 4 eV range
- Differences between soot particles a and b are more significant