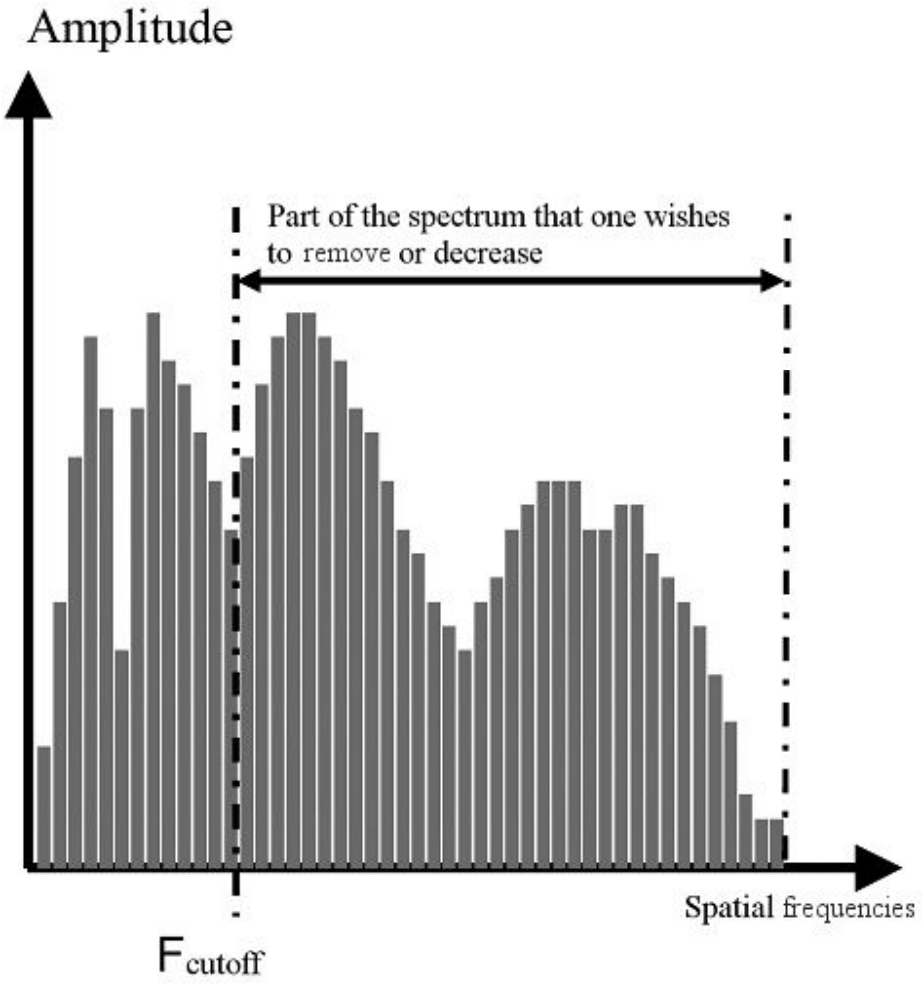

Amplitude
Part of the spectrum that one wishes to remove or decrease
Spatial frequencies
F cutoff

FIG.1

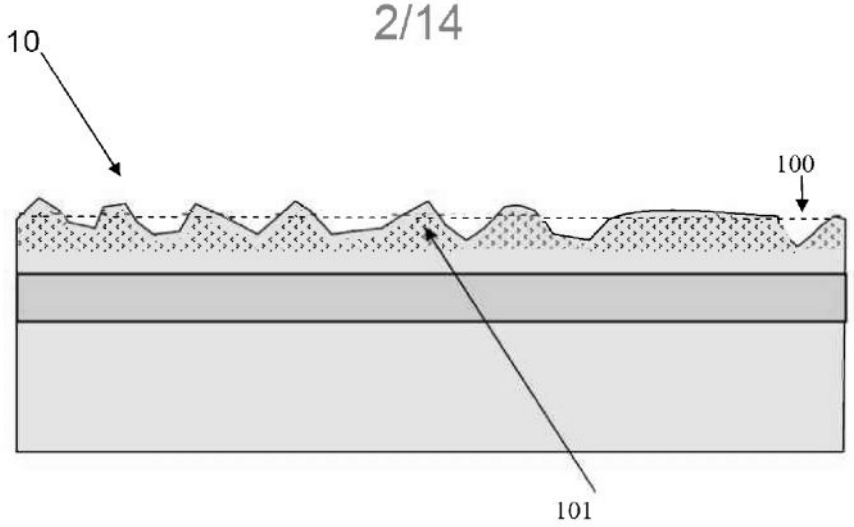


FIG. 2a

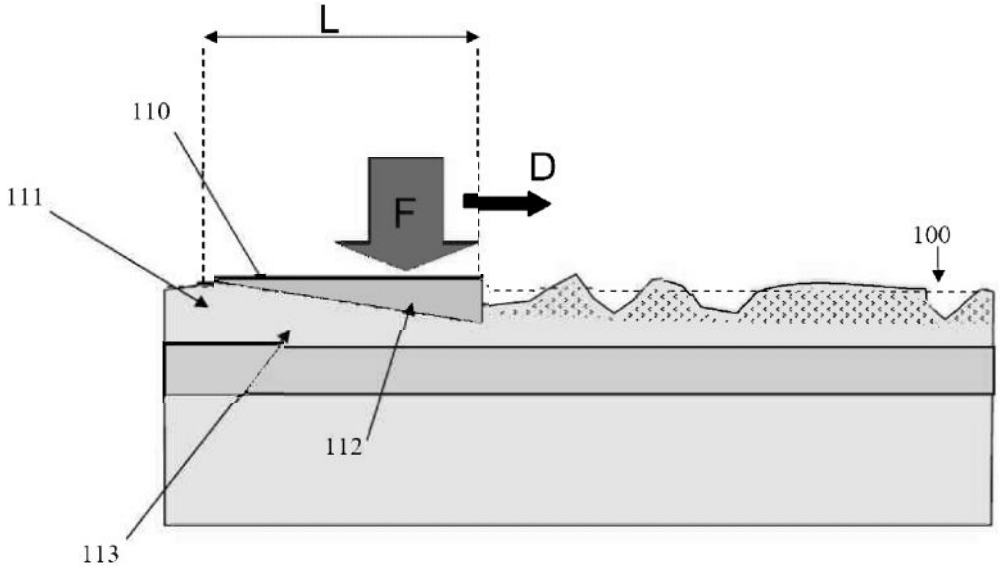


FIG. 2b

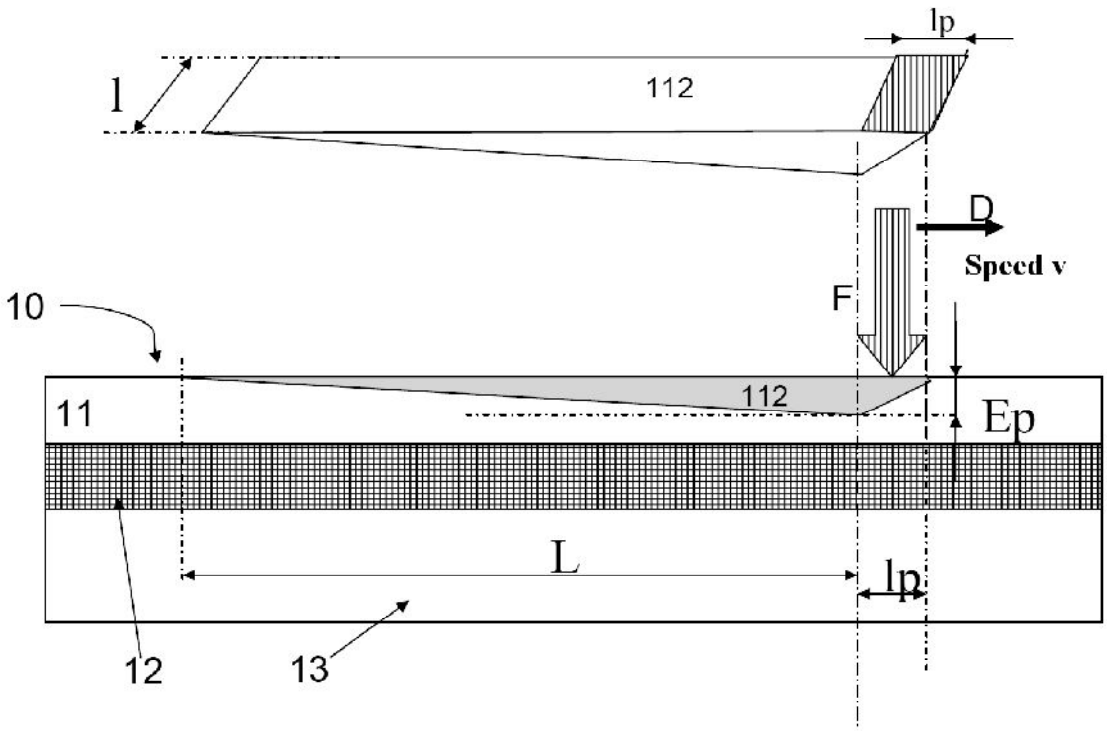


FIG. 3

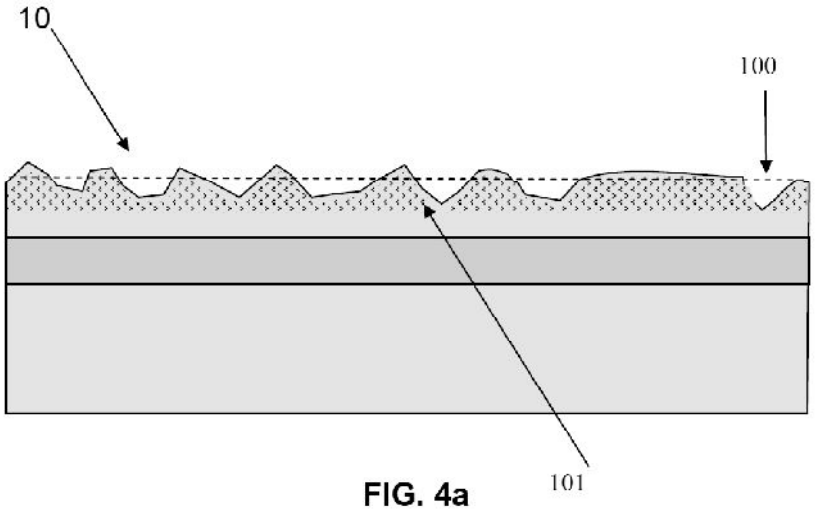


FIG. 4a

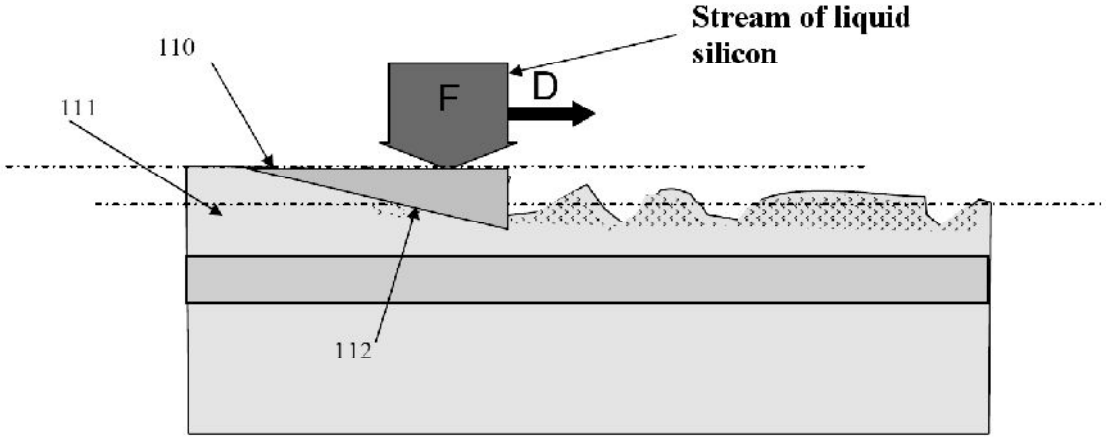


FIG. 4b

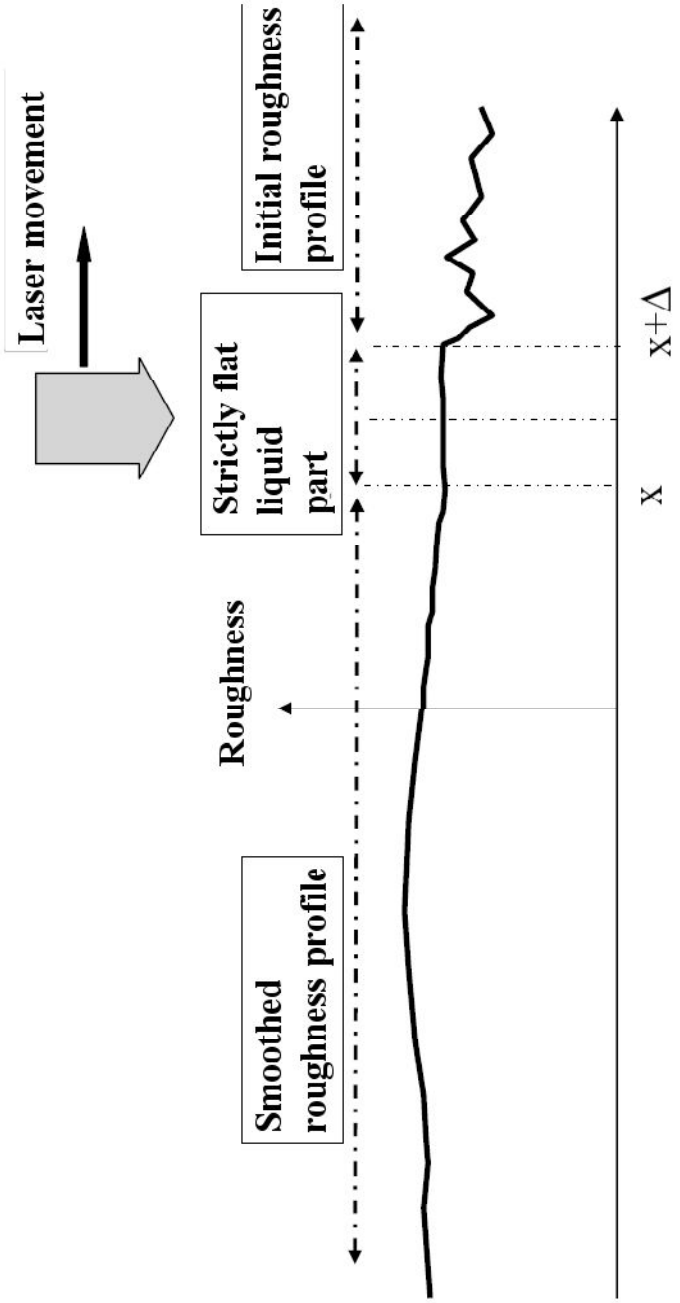

Laser movement
Initial roughness profile
Strictly flat liquid part
Roughness
Smoothed roughness profile
X
X+Δ

FIG. 5a

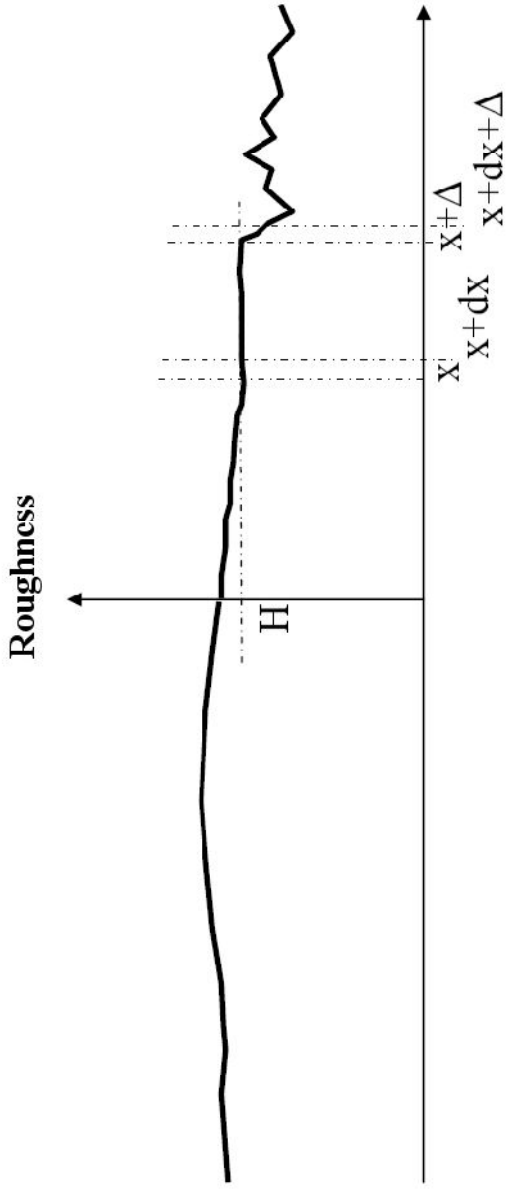


FIG. 5b

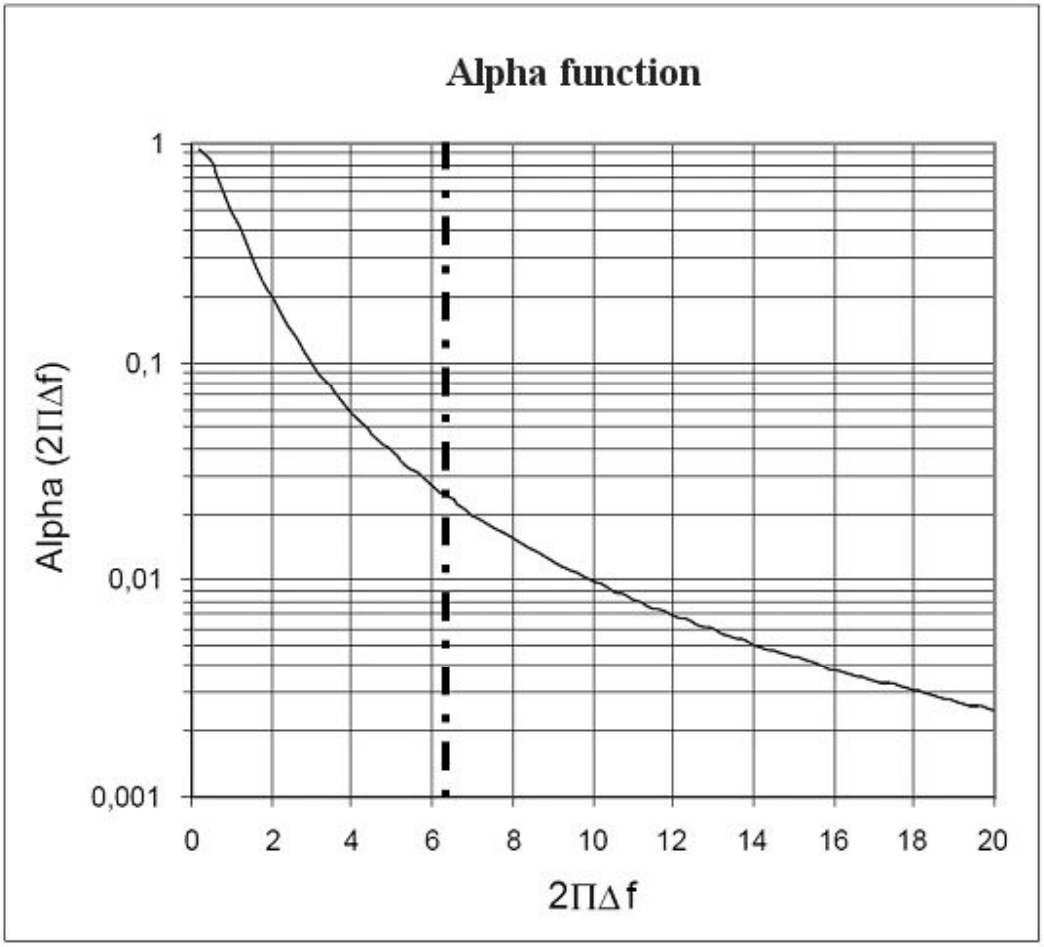

Alpha function
1
0,1
0,01
0,001
Alpha (2ΠΔf)
0
2
4
6
8
10
12
14
16
18
20
2ΠΔf

FIG. 5c

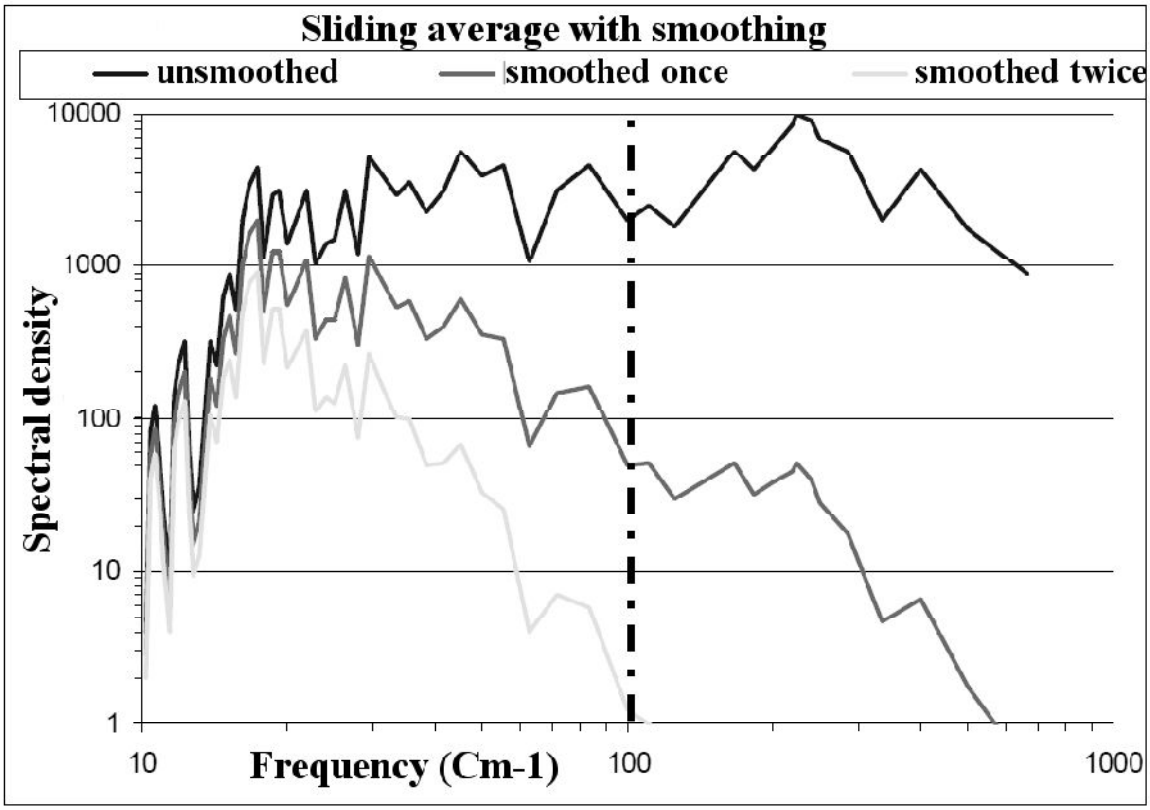

Sliding average with smoothing
unsmoothed
smoothed once
smoothed twice
10000
1000
100
10
1
Spectral density
10
Frequency (Cm-1)
100
1000

FIG. 5d

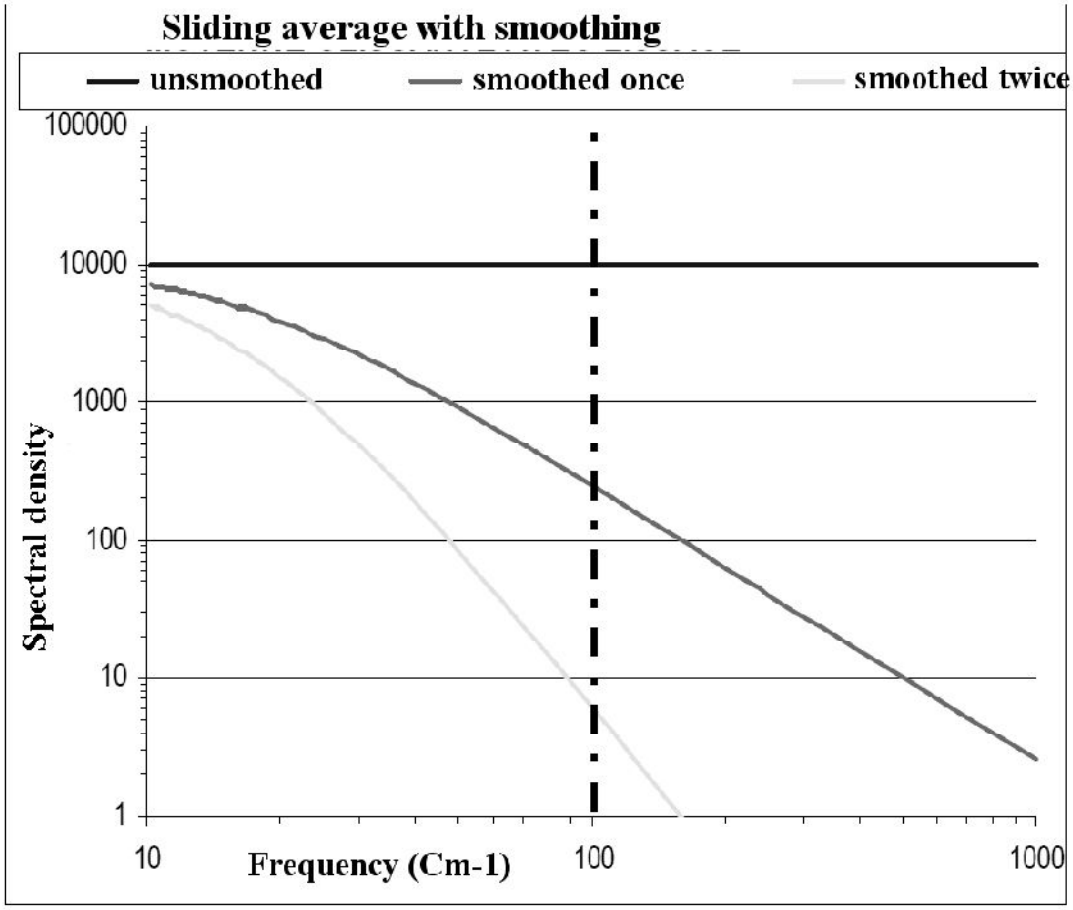

Sliding average with smoothing
unsmoothed
smoothed once
smoothed twice
100000
10000
1000
100
10
1
Spectral density
10
Frequency (Cm-1)
100
1000

FIG. 5e

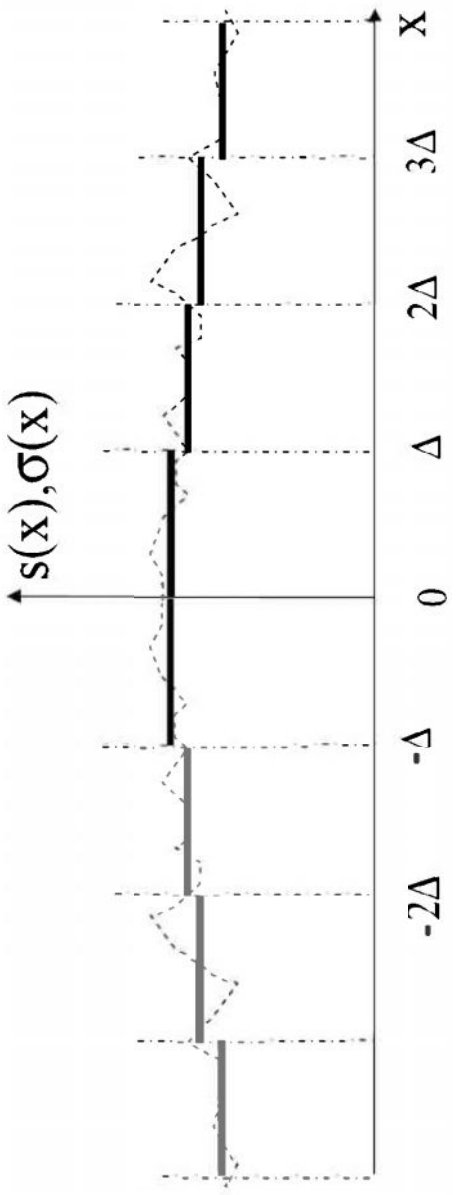


FIG. 6a

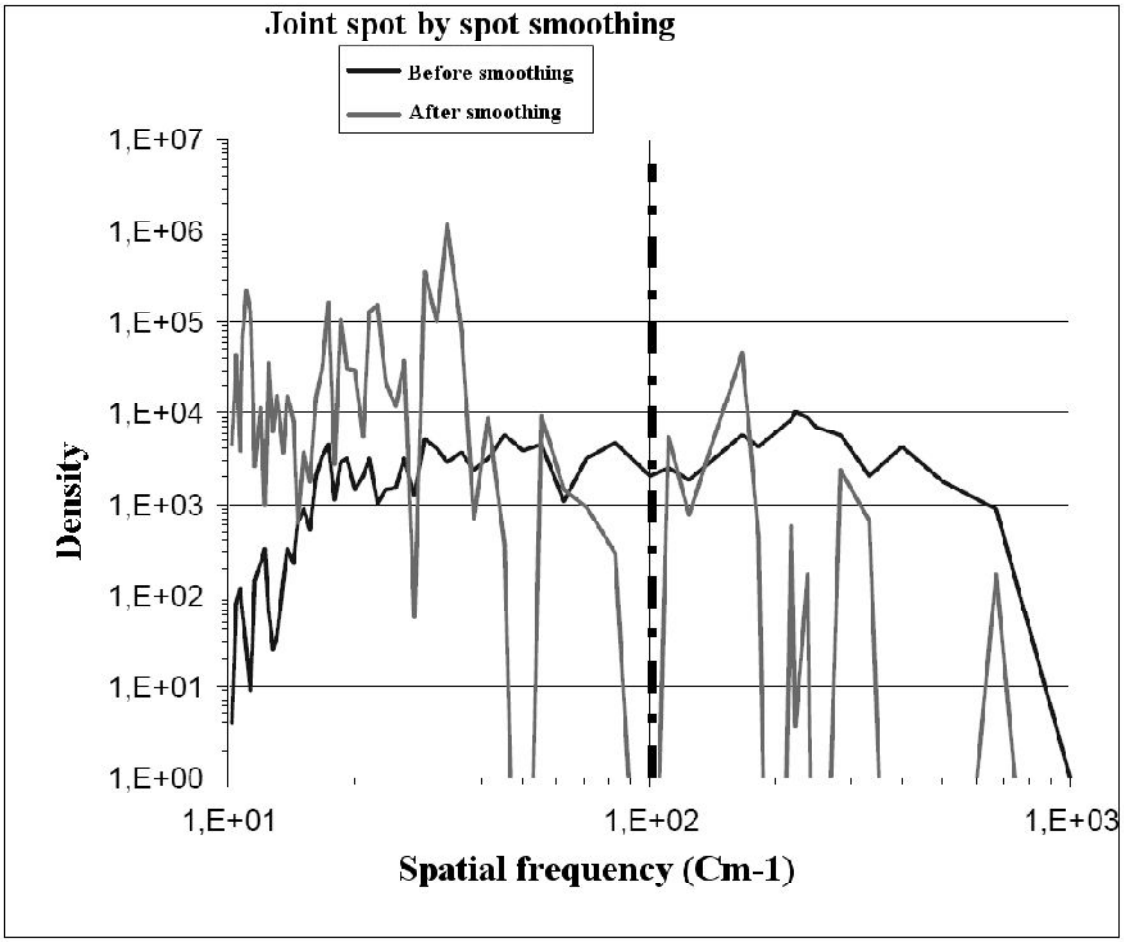

Joint spot by spot smoothing
Before smoothing
After smoothing
Density
1,E+07
1,E+06
1,E+05
1,E+04
1,E+03
1,E+02
1,E+01
1,E+00
1,E+01
1,E+02
1,E+03
Spatial frequency (Cm-1)

FIG. 6b

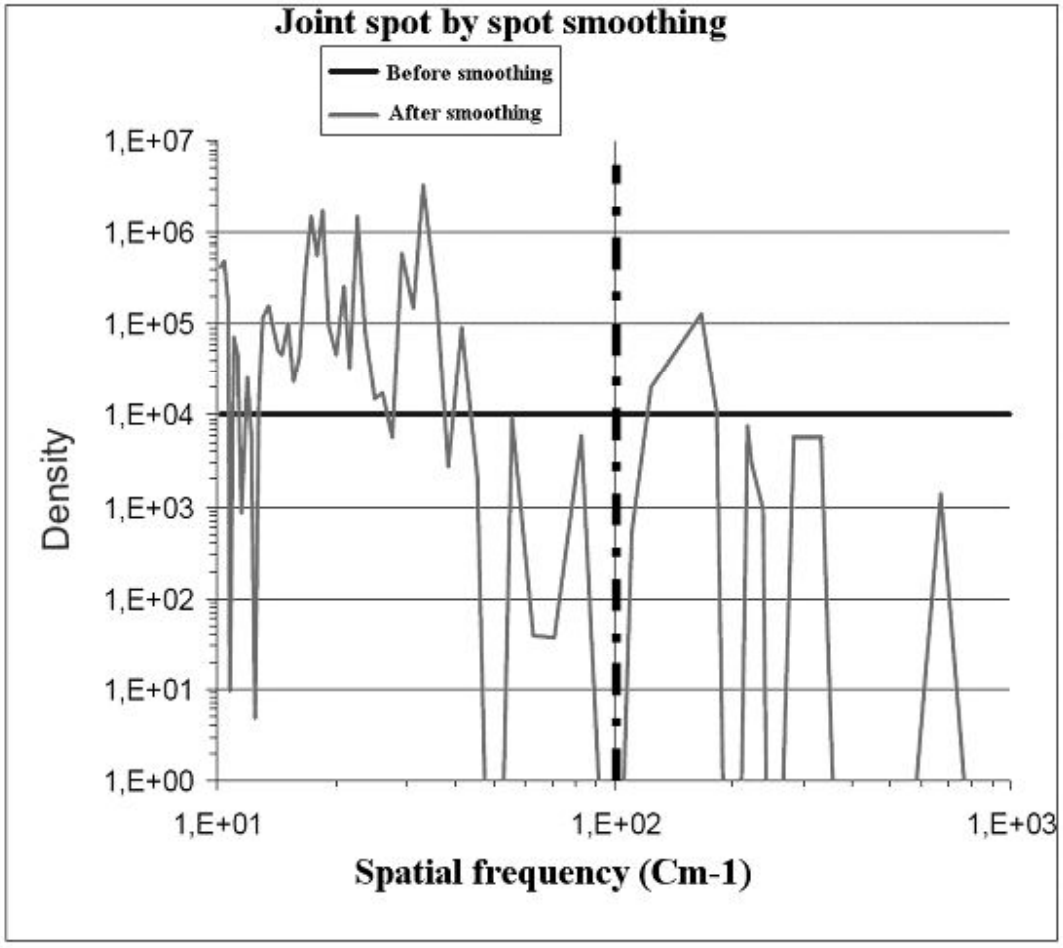

Joint spot by spot smoothing
Before smoothing
After smoothing
Density
1,E+07
1,E+06
1,E+05
1,E+04
1,E+03
1,E+02
1,E+01
1,E+00
1,E+01
1,E+02
1,E+03
Spatial frequency (Cm-1)

FIG. 6c

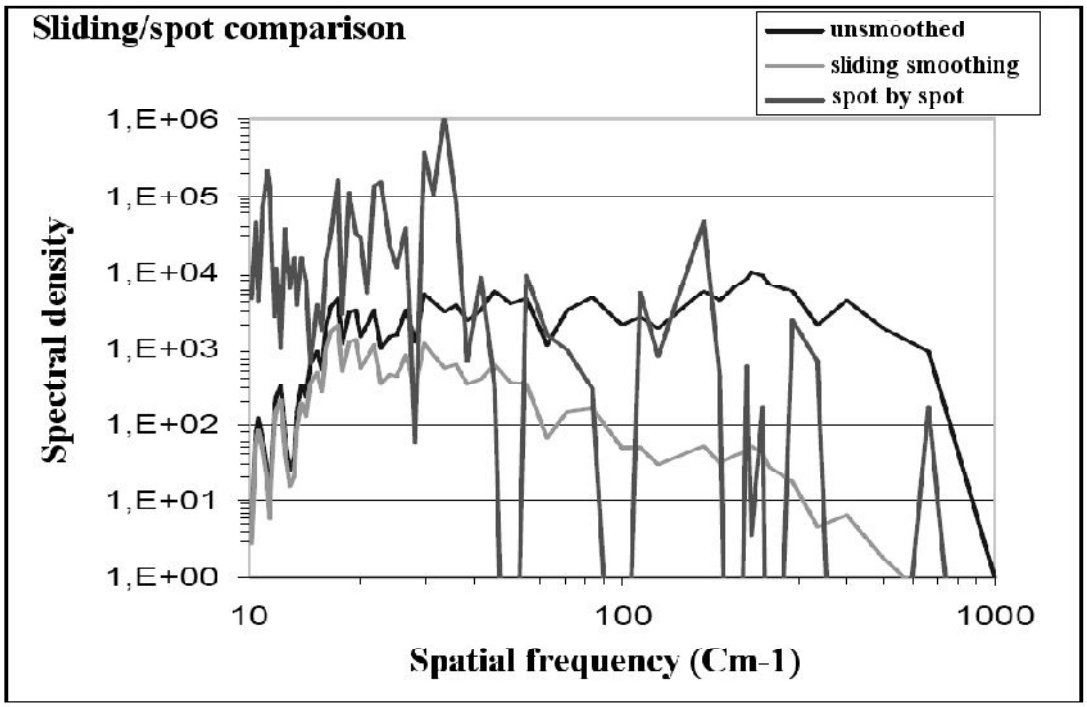

Sliding/spot comparison
unsmoothed
sliding smoothing
spot by spot
Spectral density
1,E+06
1,E+05
1,E+04
1,E+03
1,E+02
1,E+01
1,E+00
10
100
1000
Spatial frequency (Cm-1)

FIG. 7a

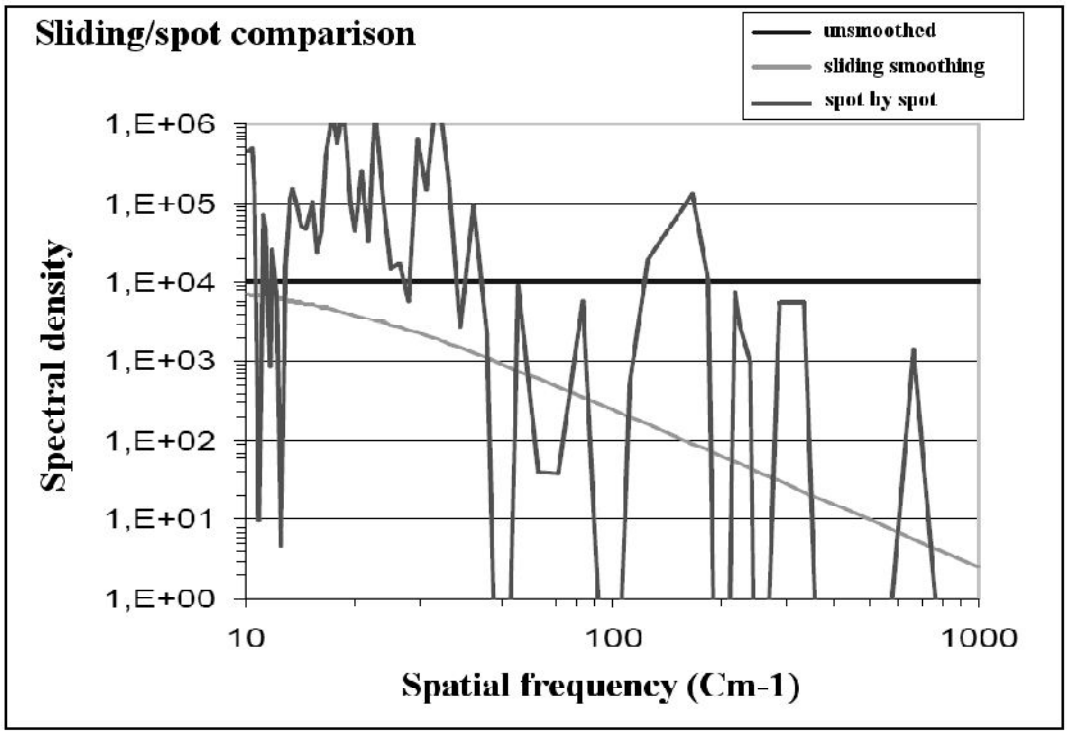

Sliding/spot comparison
unsmoothed
sliding smoothing
spot by spot
Spectral density
1,E+06
1,E+05
1,E+04
1,E+03
1,E+02
1,E+01
1,E+00
10
100
1000
Spatial frequency (Cm-1)

FIG. 7b