WS2021

PPB2

AFM

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Gruppe 3

Informationen

Versuchstag	20.09.2021
Versuchsplatz	NW II	Raum 1.2.U1.47
Betreuer	Marvin Malchau
Gruppen Nr.	3

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3.1 Geräte und Fehler

Rasterkraftmikroskop: Inventarnummer: 88459
Steuerelektronik: Inventarnummer: 88080
Cantilever (Contact Mode): NANOSENSORS type PPP-CONTR-C, S/N 78932F10L995, vom 31.7.14, Set 5
Cantilever (Non-Contact): NANOSENSORS, Type PPP-NCLR-10, S/N 66017F4L734
Eichgitter: Nummer: BT00250, x-y-Periodizität: 10,0 μm, z-Höhe: 119nm, Batch: 2003-03-29.2 Diverse Proben: Nanosurf Extended Sample Kapitel
Oberflächengitter: Gitter(1.9.14)

3.2 Versuchsdurchführung

3.2.1 Eichgitter

Modus	Contact Mode
Image size	62,65 μm
Time / Line	2s
Points/Line	512
Setpoint	15 nN
P-Gain	10000
I-Gain	1000
D-Gain	0

3.2.2 CD-Presswerkzeug

50μm

Modus	Contact Mode
Image size	50,00 μm
Time / Line	2s
Points/Line	512
Setpoint	15 nN
P-Gain	10000
I-Gain	1000
D-Gain	0

3 Methodik

20μm

Modus	Contact Mode
Image size	19,34 μm
Time / Line	2s
Points/Line	512
Setpoint	15 nN
P-Gain	10000
I-Gain	1000
D-Gain	0

3.2.3 Nanotubes

15μm

Modus	Contact Mode
Image size	15,00 μm
Time / Line	1,3s
Points/Line	512
Setpoint	3,02 nN
P-Gain	10000
I-Gain	1000
D-Gain	0

2μm

Modus	Contact Mode
Image size	2,168 μm
Time / Line	1,3s
Points/Line	512
Setpoint	3,02 nN
P-Gain	10000
I-Gain	1000
D-Gain	0

3.2.4 Goldcluster

2,5 μm

Modus	Non-Contact Mode
Image size	2,5 μm
Time / Line	1s
Points/Line	512
Setpoint	60%
P-Gain	10000
I-Gain	1000
D-Gain	0

1,5 μm

Modus	Non-Contact Mode
Image size	1,5 μm
Time / Line	1s
Points/Line	512
Setpoint	70%
P-Gain	10000
I-Gain	1000
D-Gain	0

0,375 μm

Modus	Non-Contact Mode
Image size	0,375 μm
Time / Line	1s
Points/Line	512
Setpoint	70%
P-Gain	10000
I-Gain	1000
D-Gain	0

3.2.5 Oberflächengitter

Modus	Non-Contact Mode
Image size	20 μm
Time / Line	1,75s
Points/Line	512
Setpoint	60%
P-Gain	10000
I-Gain	1000
D-Gain	0

3.2.6 PSPMMA

Modus	Non-Contact Mode, Phase Contrast
Image size	2 μm
Time / Line	1s
Points/Line	512
Setpoint	70%
P-Gain	10000
I-Gain	1000
D-Gain	0

4 Auswertung und Diskussion

5 Fazit

A Anhang