先加液態氮、開啟外接紅外光 開啟 OMNIC 7 的畫面 按下紅色部分(Experiment Setup)

🕭 OMNIC - [Window1]							
Ele Edit Collect View Process	s <u>Analyze</u> Series <u>R</u> ep	ort <u>Window H</u> elp					_ = ×
Experiment. Derault - Transmiss	sion						Bench Status
	l 🛎 🖂   📴	: 🖂 🚵 💥 🚟 🛍	u   🔍 🏊 😔 (	🛞   🎬 🏝 🐃			
Experiment Setup							
No specifia selected							
100							
30							
90-							
85 -							
80 -							
75 -							
70 -							
65 -							
60 -							
55 -							
50 -							
45 -							
40 -							
35 -							
30 -							
25 -							
20-							
15 -							
10 -							
5-							
0							
4000	3500	3000	2500	2000	1500	1000	500
TAAM							2
000000							

# 出現以下視窗

Experiment Setup -> Bench (確認紅色部分) -> Save -> OK



如果干涉儀位置再 Loc:1024 跳動的幅度過大 Experiment Setup -> Diagnostic -> Reset Bench 紅色部分) -> Save -> OK 跳動的幅度還是很大的話,再 Align... (藍色部分) -> Save -> OK

Experiment Setup - C:\My Documents\OMNIC\Param\Default.exp	?	×
Collect Bench Quality Advanced Diagnostic Configure		
Ø 🐩 🗶 💊 🚨		
Max:8.45 Min:-5.94 Loc:1031		
Uiew reference detector		
1100 1000		
Data points		
Freeze Align Reset Bench Verify Smart Accessory		
Help Open Save Save As OK Canc	el	

接著確認 Single beam 的強度

Experiment Setup -> Bench (確認紅色部分) -> 將 Single beam 打勾-> Save -> OK

Experiment Setup - C:\MyDocuments\OMNIC\Param\	Experiment Setup - C:\My Documents\OMNIC\Param\Default.exp							
Collect Bench Overlag Intersect Diagnostic Configure								
Peak to Peak:53.61	Parameter	Value						
🖆 🗂 Min/Max 💿 Peak to peak	Sample compartment	Main	-					
	Detector	MCT/A	•					
	Beamsplitter	KBr	-					
	Source	IR	•					
	Accessory	ATR	-					
	Window	Ge	-					
h	Recommended range	4000 650	_					
	Max range limit	4000						
	Min range limit	650						
	Gain:1	1.0	•					
	Velocity	1.8988	-					
· · · · · · · · · · · · · · · · · · ·	Aperture	74						
2000 Wavenumbers (cm-1)	Sample shuttle							
Freeze Single beam								
Help Open Save Save As		ОК	Cancel					

調完上述部分後

先取背景光譜,按下紅色部分(Experiment Setup)



#### 跳出以下視窗

Experiment Setup -> Collect(確認紅色部分) -> Save -> OK



#### 按下紅色部分(Collect Background)

🕭 OMNIC - [Window1]
🛅 Elle Edit Collect Yew Brocess Analyze Series Report Window Help
Experiment: Default - Transmission
C Experiment Setup INO Spectra Selected

#### 跳出以下視窗,按 OK

Confirmation					
2	Background Please prepare to collect the background spectrum.				
	Cancel				

之後背景光譜開始收集

收完背景光譜後出現以下視窗 不繼續收按下 Yes (紅色部分) 想要增加掃描數按下 More Scans (藍色部分) 不想此次的光譜按下 No (綠色部分)

Confirmation		X						
Data collection	Data collection has stopped.							
View Collect	Status							
Add to Window:	12							
Yes	No	More Scans						

按下 Yes 後跳回到 Window 1-> 存檔



File -> Save as (紅色部分)或者按藍色部分 會出現以下視窗(選擇要存的資料夾及檔名) -> Save

Save As - Ba	ckground(1.8988)-SCAN12	5	? 🛛
Save jn: 🗀	20190225-ATR	- 🗢 🖻 🖻	* <b>III</b> •
File name:	Background(1.8988)-SCAN125		Save
Save as type:	Spectra (*.SPA)	•	Cancel
📃 <u>R</u> ead onl	y	Course	
		Set Filenam	to Title
Background	(1.8988)-SCAN125		
Januaria			

按下 More Scans 則會出現以下視窗,按下 More (紅色部分)



會出現以下視窗,選擇要增加的 Scan 數目(紅色部分),按下 OK(藍色部分)



按下 OK 後即開始掃描

# 接著取樣品光譜

Experiment Setup -> Collect (確認紅色部分) -> 藍色部分按下 Browse... 選背景光 譜 -> Save -> OK

Experiment Setup - C:\My Documents\OMNIC\	Param'Default.exp 🛛 💽 🔀
Collect Bench Quality Advanced Diagnostic	Configure
Estimated time for this collection: 00:01:19	File Handling
No. of scar <mark>s</mark> : 128	Save automatically Save interferograms
Resolution: 4.	Base name:  C:\My Documents\OMNIC\autosave\0001.spa
Data spacing: 1.928 cm-1	Background Handling
Final format: Absorbance 🗾	O Collect background before every sample
Correction: H2O and CO2 🚽	O Collect background after every sample
Automatic atmospheric suppression     Preview data collection     Use fixed Y-axis limits in collect window     Min: 0.00 Max: 2.00     Experiment title:     Transmission	Collect background after 100 prior to Collect background file: C:Documents and SettingsSupervis Browse Collect 64 scans for the background Experiment description: This is the default experiment file.
Help Open Save Save A	S OK Cancel

#### 按下紅色部分(Collect Sample)

٨	омн	IC - [	Windo	w1]															
	Ele	Edt	⊆ollect	Yew	Process	Analyze	Series	Report	Window	Help									
E	xperi	ment	: Defau	ılt - Tra	ansmissi	ion				-	]								
٩	<b>b</b> <u>p</u> 1		ايو) المليا		6	ڭ 🛎			<u> </u>	n 12		<u>iii</u>	ଭ୍	1	ଭୁ	0	<u>1</u>	<u>}</u> 4	6
		u spi	nt Setup ectra St	lected	l														

# 跳出以下視窗,按 OK



之後樣品光譜開始收集

收完樣品光譜後出現以下視窗 不繼續收按下 Yes (紅色部分) 想要增加掃描數按下 More Scans (藍色部分) 不想此次的光譜按下 No (綠色部分)

Confirmation		
Data collection	has stopped.	
View Collect	Status	
Add to Window	1?	
Yes	No	More Scans

按下 Yes 後跳回到 Window 1-> 存檔



File -> Save as (紅色部分)或者按藍色部分 會出現以下視窗(選擇要存的資料夾及檔名) -> Save

Save As - Ba	ckground(1.8988)-SCAN12	5	? 🛛
Save jn: 🚞	20190225-ATR	- 🗢 🖻	
File game:	Background[1.8988]-SCAN125		Save
Save as type:	Spectra (*.SPA)	•	Cancel
Read onl	/	Course	
		SetFilename	to Title
Background	(1.8988)-SCAN125		
Joackground	(1.0300)-0044123		

按下 More Scans 則會出現以下視窗,按下 More



會出現以下視窗,選擇要增加的 Scan 數目(紅色部分),按下 OK(藍色部分)



按下 OK 後即開始掃描

# 接者取 Series

Series -> Series Setup (紅色部分)



#### 出現以下視窗

Series ->	Series Setup -	> Collect	(確認紅色部分)
-----------	----------------	-----------	----------

🚟 Serie	s Setup		×						
Collect	Backgro	und THeater	s TLive Display						
	Data collection type	Real time 🔽	Sampling interval (sec): 408.0957						
			Number of spectra in series: 0						
bla a		4024	Estimated file size (bytes): 15660						
NO. O	scans per spectrum.	1024	Disk space left (bytes): 4115488768						
Total	collection time (sec):	300.00							
		🔲 Lise reneat time	Repeat time (sec): 0.00						
	Resolution (cm-1):	4.	Velocity (cm/sec) 1.8988 🖃						
	Start collection at external trigger								
		📃 Bidirectional col	ection						
	Minimize scan length								
	Split bidirectional interferograms								
Time axis unit: 🔿 Minute Second									
Ок	Cancel	Help							

🧮 Series Setup		X
Collect Backgro	ound Heaters Live Display	
O Co	llect background before series	
Number of scans: 10		
🔿 Us	e specified background file	
Filename: C:\Do	cuments and Browse	
🕑 Us	e current background	
OK Cancel	Help	

# Series -> Series Setup -> Background (選擇紅色部分即可) -> 按下 OK

#### 取 Series

Series -> Collect Series (紅色部分)



# 先存檔(選擇資料夾打好檔名)

Save As					? 🛛
Save in: 🚞 Series	•	÷	£	<b>t</b>	•
⊠ example.srs					
File name: series0001.srs	_	_			Save
Save as type: Series (".SRS)		1	-		Cancel
Series					
Mon Feb 25 15:36:44 2019 (GMT+08:00)					

# 在存檔切記不能出現以下視窗,不然檔案的命名會不完全,或者是根本沒存到此檔案



#### 存檔完會先跑校正



# 跑完後出現以下視窗,按下 OK

Confirm	nation
2	Choose OK or press the space bar to begin data collection.

開始收 Series

以下的視窗代表跑完 Series



收下一個樣品只需 Series -> Collect Series -> 存檔 -> 校正 -> 按 OK 即可

用完儀器後,將 Detector 調回 PbSe 、Source 調回 Off (紅色部分)-> Save -> OK

Experiment Setup - C:\My Documents\OMNIC\Param\Default.exp								
Collect Bench Quality Advanced Diagnostic Configure								
Max:0.15 Min:-0.14 Loc:1025	Parameter	Value	1					
🕒 🔄 Min/Max 🛛 Peak to peak	Sample compartment	Main 👻						
	Detector	PbSe 🗸						
	Beamsplitter	KBr 🗸 🔻						
	Source	Off 🗾 🗸						
	Accessory	AIR 🔹						
	Window	Ge 🔹						
	Recommended range	5500 2000						
	Max range limit	5500						
	Min range limit	2000						
	Gain:1	1.0 💌						
	Velocity	0.9494 🗸						
	Aperture	74						
1100 1000	Sample shuttle							
Data points			1					
Freeze Single beam								
Help Open Save Save As OK Cancel								

之後將 OMNIC 關 -> 電腦關 -> 外接紅外光關 -> 即可

Experiment Setup - C:\My Documents\OMNIC\Param\Default.exp						
Collect Bench Quality Advanced Diagnostic Configure						
Estimated time for this collection: 00:00:04 File Handling						
No. of scans: 💈	Save automatically Save interferograms					
Resolution: 4.	C:\My Documents\OMNIC\autosave\0001.spa					
Data spacing: 1.928 cm-1	Background Handling					
Final format: Absorbance 📃	Collect background before every sample					
Correction: H2O and CO2 🗾	Collect background after every sample					
🗹 Automatic atmospheric suppression	Collect background after 100 minutes					
Preview data collection	Ouse specified background file:					
Use fixed Y-axis limits in collect window	CADOCUMENTS and Settingstsupervise Browse					
Min: 0.00 Max: 2.00	Collect 64 scans for the background					
Experiment title:	Experiment description:					
Transmission	This is the default experiment file.					
Help Open Save Save As OK Cancel						

設定完 Series 調回到 Experiment Setup -> Collect 出現以下視窗是正常的