

明-天-就-投-稿！

康敦彥 教授

化學工程學系

2023.05.16





為何不能明天就投稿?



為何不能明天就投稿?

□ Data不夠好



為何不能明天就投稿?

- Data不夠好
- 老師說不行



為何不能明天就投稿?

- ☐ Data不夠好
- ☐ 老師說不行
- ☒ Paper沒寫出來



為何不把paper寫出來?



為何不把paper寫出來?

□ Data不夠好



為何不把paper寫出來?

- Data不夠好
- 老師說不行



為何不把paper寫出來?

- Data不夠好
- 老師說不行
- 沒時間寫



為何不把paper寫出來？

- ☐ Data不夠好
- ☐ 老師說不行
- ☐ 沒時間寫
- ☒ 我不想寫



為何不把paper寫出來？

- ☐ Data不夠好
- ☐ 老師說不行
- ☐ 沒時間寫
- ☒ 我不想寫

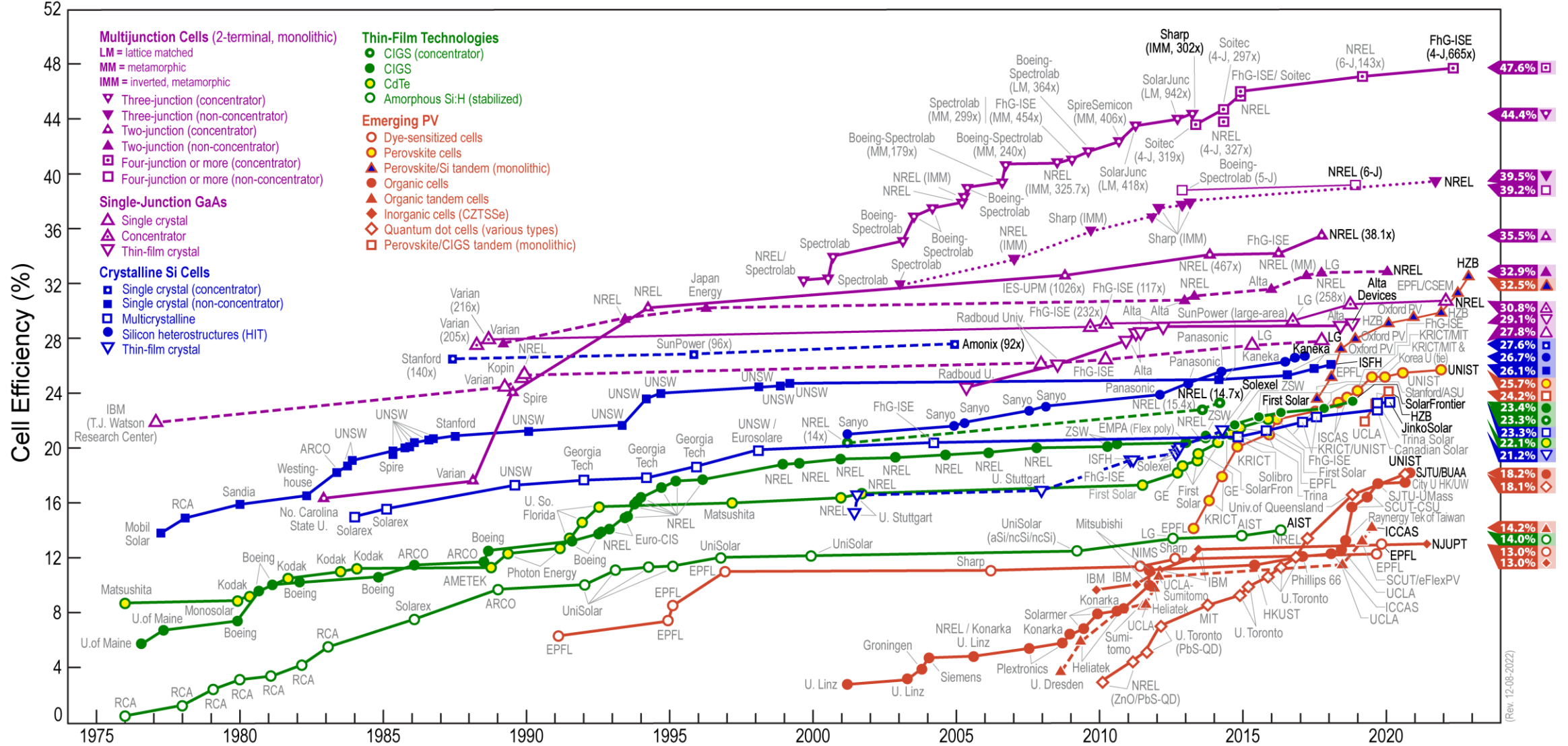




夠好的Data?



Best Research-Cell Efficiencies



<https://www.nrel.gov/pv/cell-efficiency.html>





你可以畢業的data
= 夠好的data
= 可以發表成paper的data



夠好的Data – 務實版





Contents lists available at [ScienceDirect](#)

Journal of Membrane Science

journal homepage: www.elsevier.com/locate/memsci



Highly-selective MOF-303 membrane for alcohol dehydration

Jun-Yu Lai^a, Ting-Yuan Wang^a, Changlong Zou^b, Jiun-Jen Chen^{c,***}, Li-Chiang Lin^{a,b,**},
Dun-Yen Kang^{a,*}

^a Department of Chemical Engineering, National Taiwan University, No. 1, Sec. 4, Roosevelt Road, Taipei, 10617, Taiwan

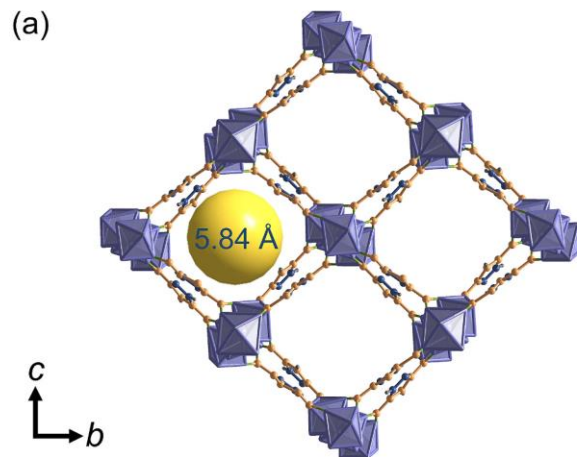
^b William G. Lowrie Department of Chemical and Biomolecular Engineering, The Ohio State University, 151 W. Woodruff Avenue, Columbus, OH, 43210, United States

^c Green Energy and Environment Research Laboratories, Industrial Technology Research Institute, No. 195, Sec. 4, Chung Hsing Road, Hsinchu, 31040, Taiwan

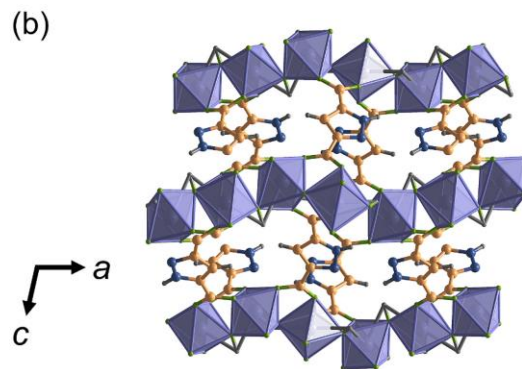


Fig.1
介紹A材料

(a)



(b)



(c)

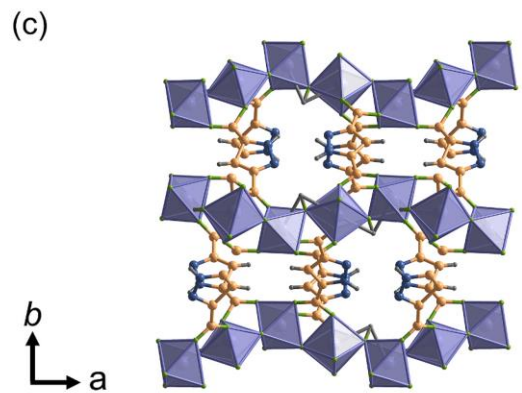




Fig.2
探討合成條件I對A材料的
的X,Y特性影響

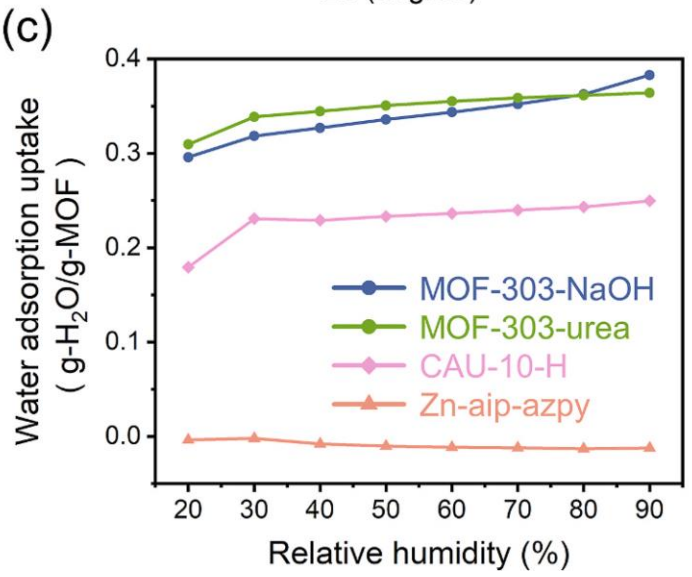
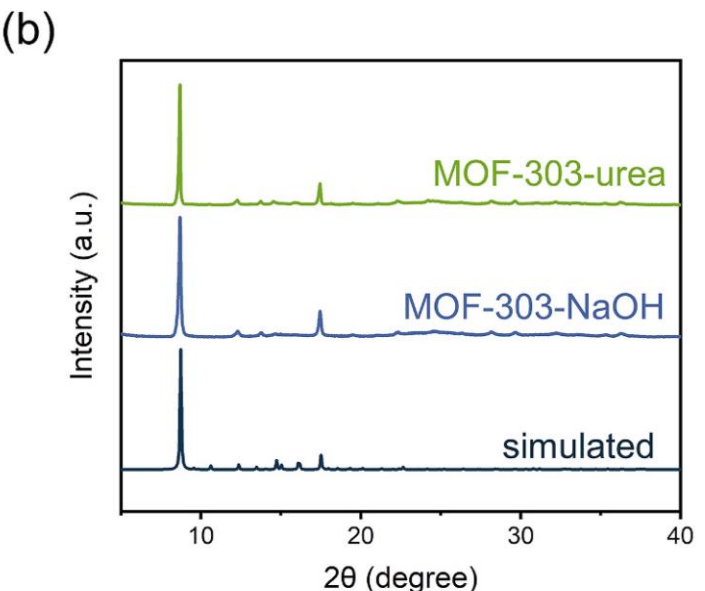
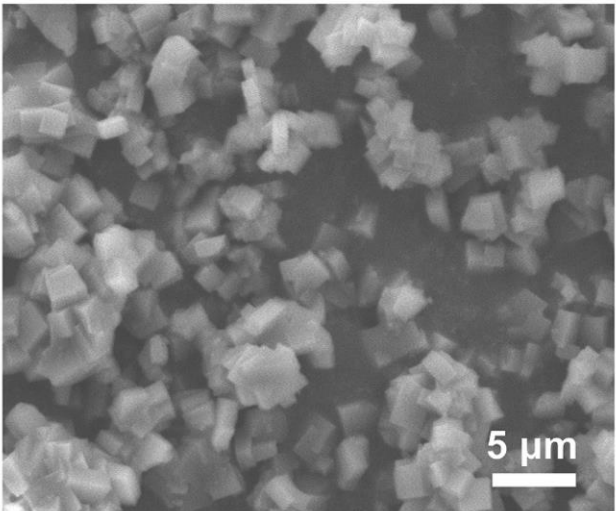
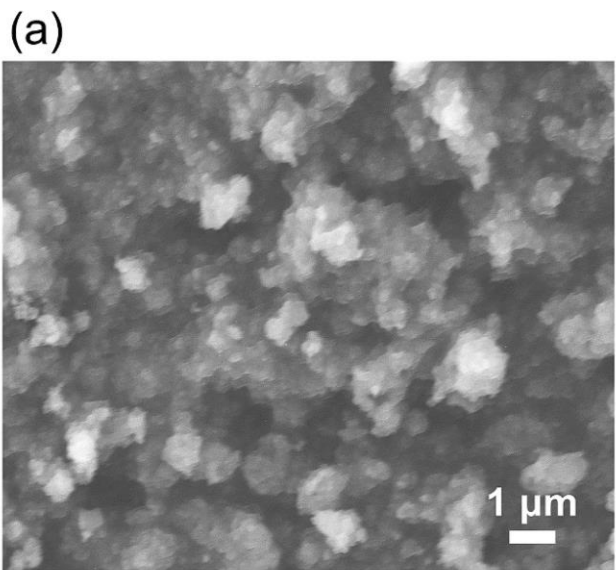


Fig.3
探討合成條件I對A材料的
X,Y特性影響

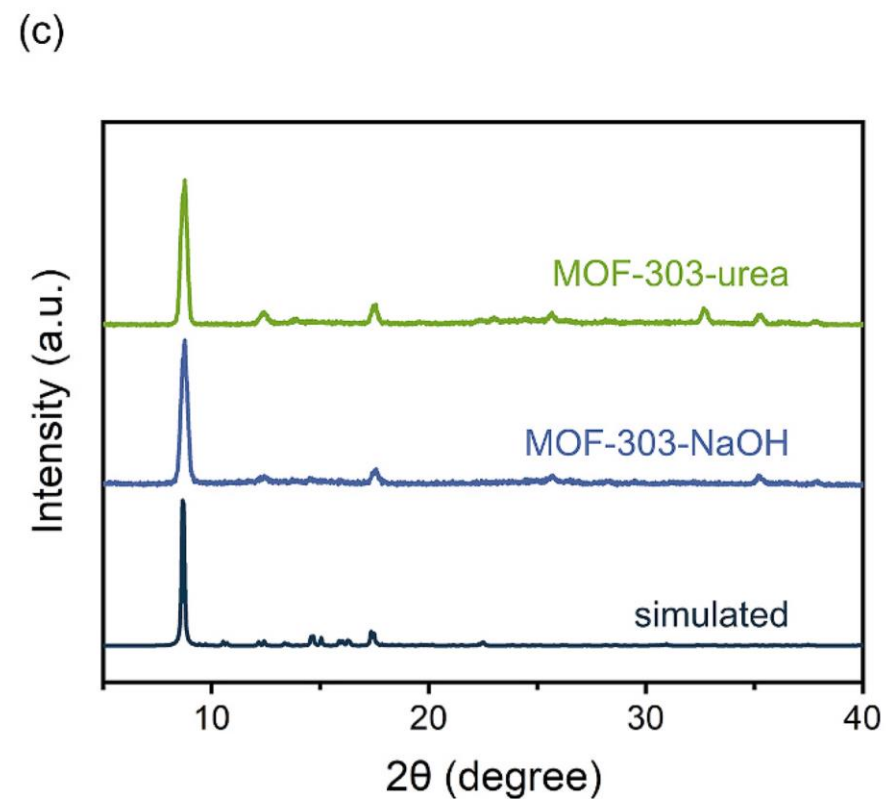
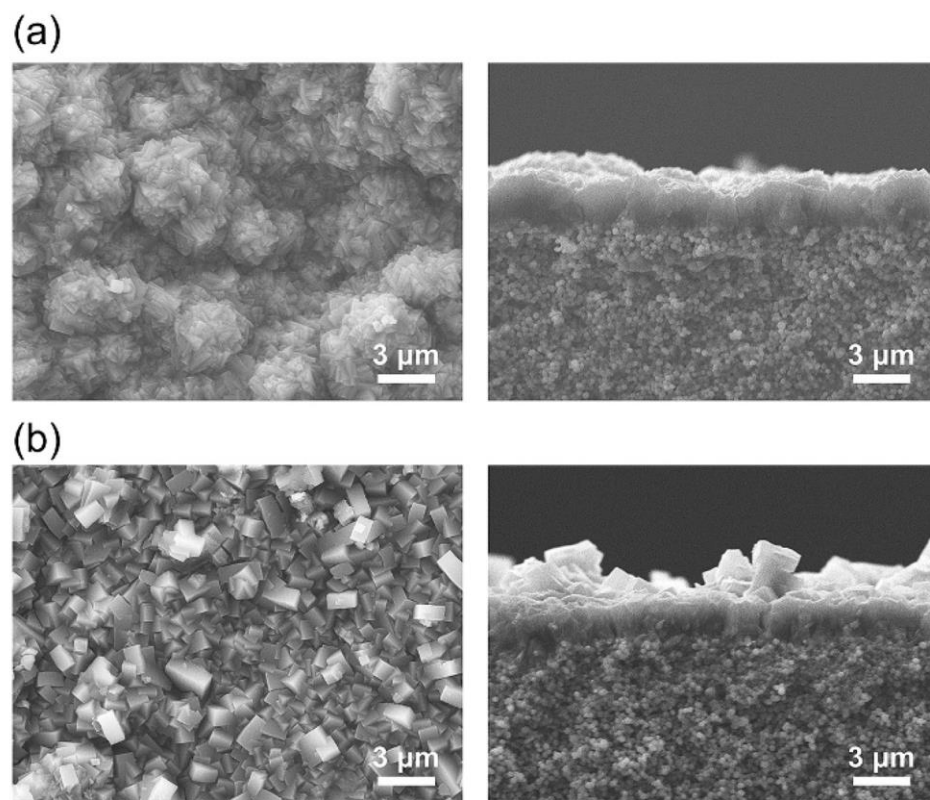




Fig.4
A材料在Z的應用

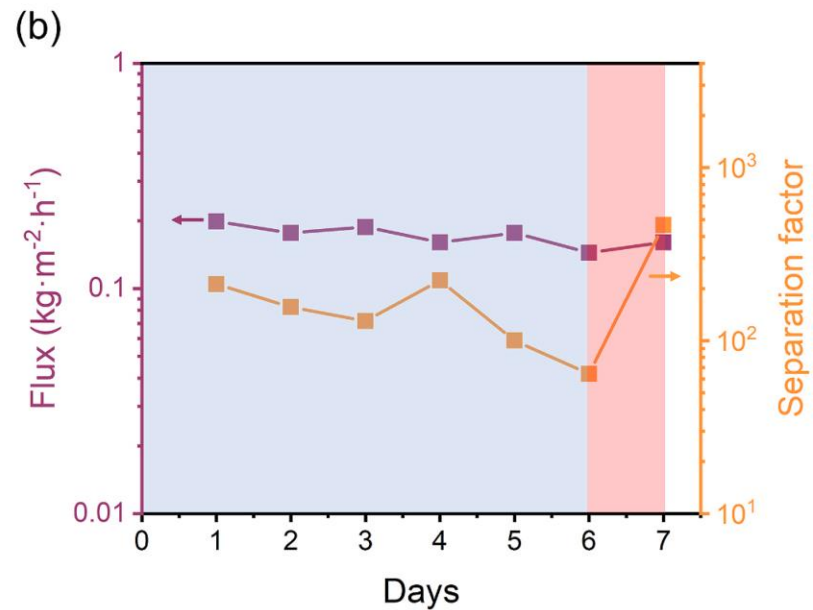
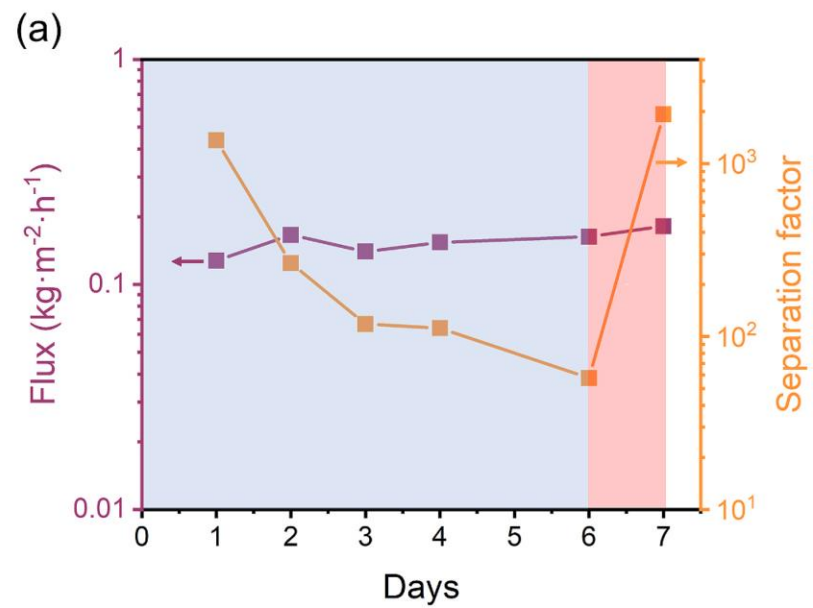




Fig.5
參數II對於A材料在Z
應用的影響

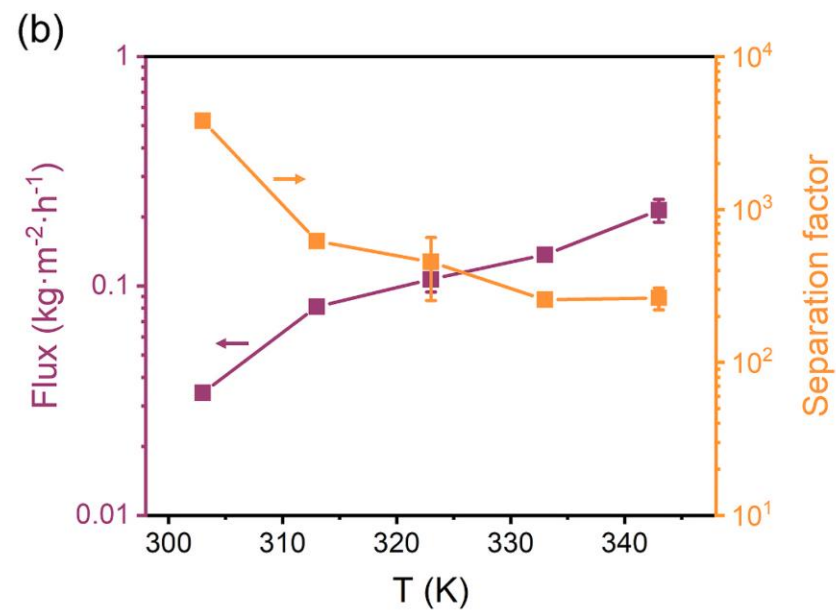
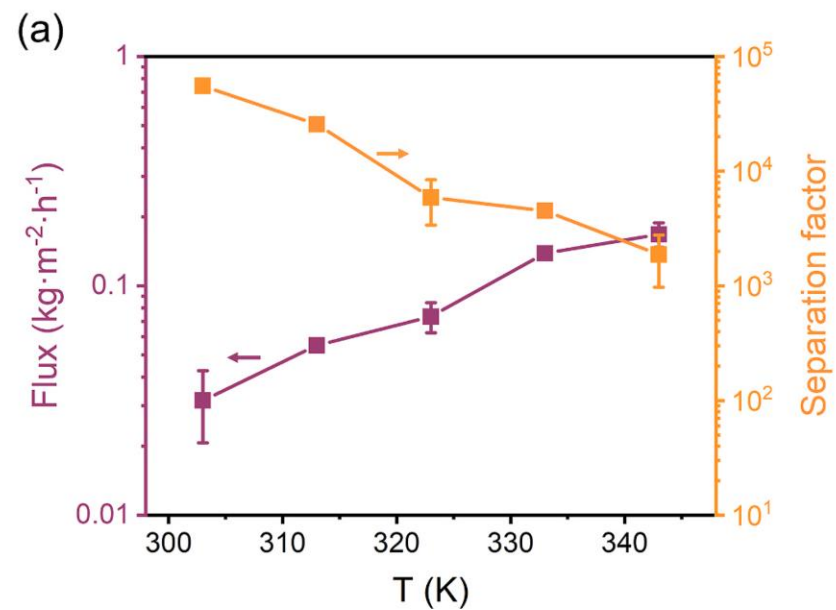




Fig.6
A材料與其他既有材料
在Z應用的效能比較

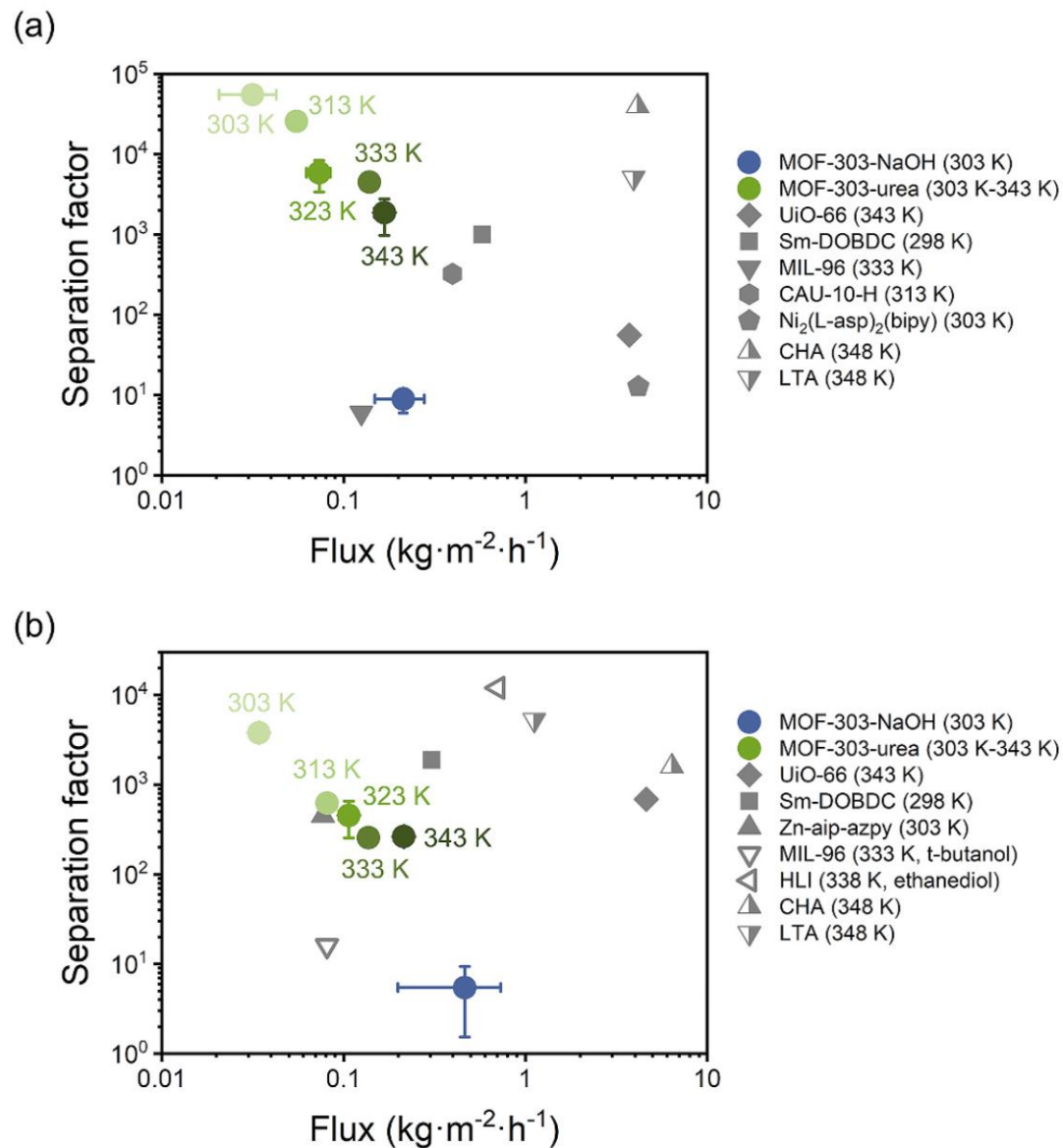




Fig.7
利用a測試討論A材料
在Z應用的效能表現

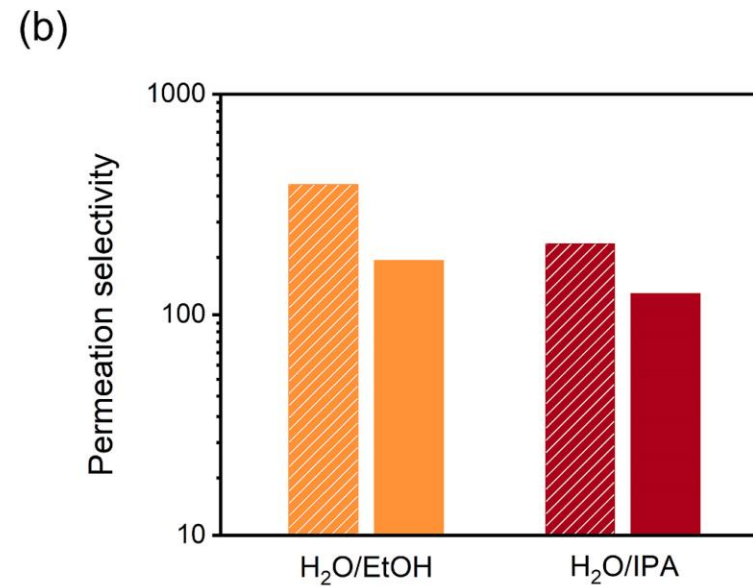
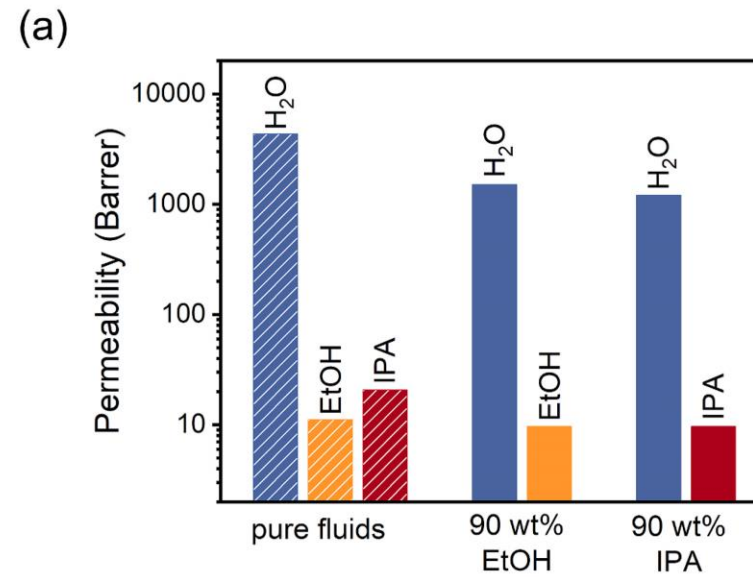
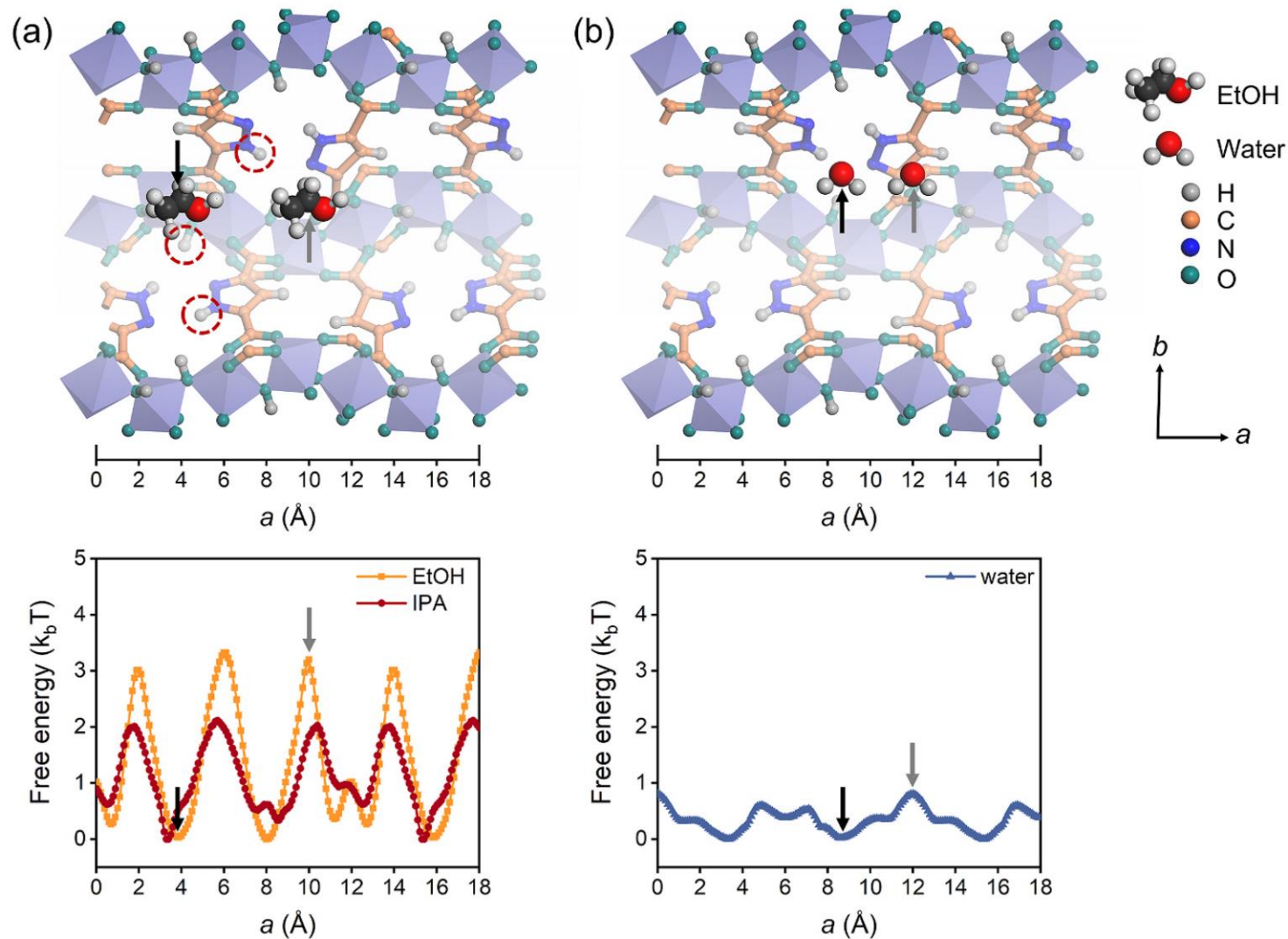




Fig.8
利用b測試討論A材料
在Z應用的效能表現







夠好的Data – 務實版





這樣做科學研究
有什麼意義？



把研究成果寫成paper發表的意義

- ✓ 向世界分享資訊
- ✓ 對自己使用的研究資源有所交待
- ✓ 小小的成就感



感覺還是
沒意義...

- ☑ 向世界分享資訊
- ☑ 對自己使用的研究資源有所交待
- ☑ 小小的成就感



你覺得有意義的事情

- ☑ 阻止地球暖化
- ☑ 拯救北極熊
- ☑ 解決貧富差距
- ☑ 實現世界和平



✓ 阻止地球暖化

✓ 拯救北極熊

✓ 解決貧富差距

✓ 實現世界和平



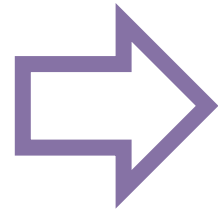
✓ 向世界分享資訊

✓ 對自己使用的研究資源
有所交待

✓ 小小的成就感



- ☑ 阻止地球暖化
- ☑ 拯救北極熊
- ☑ 解決貧富差距
- ☑ 實現世界和平



你來念研究所
幹嘛??



○○○有什麼意義？



這是個沒意義的問題

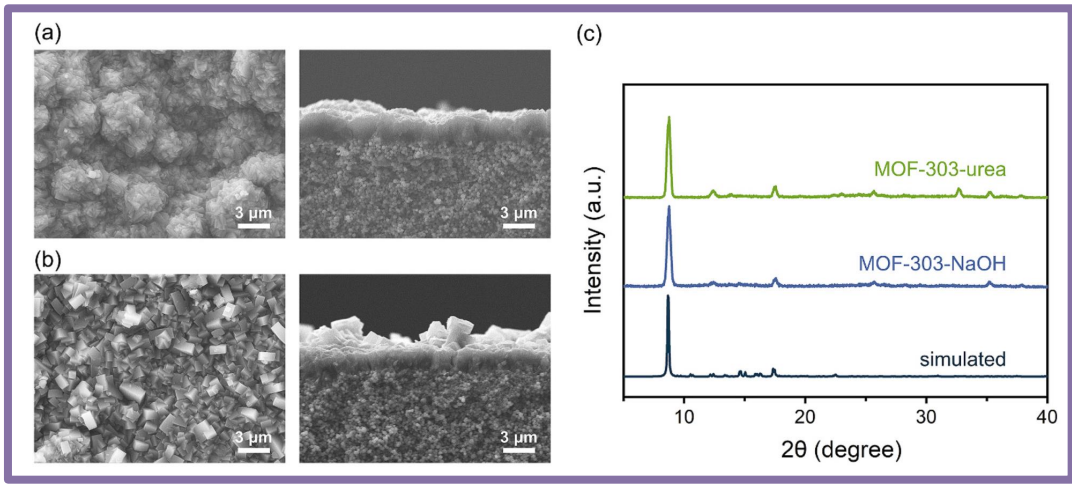
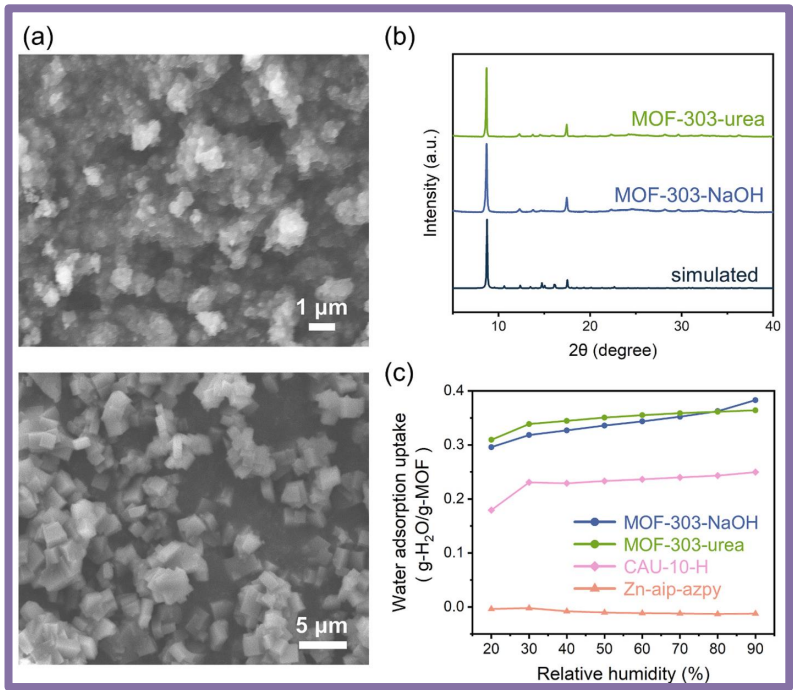
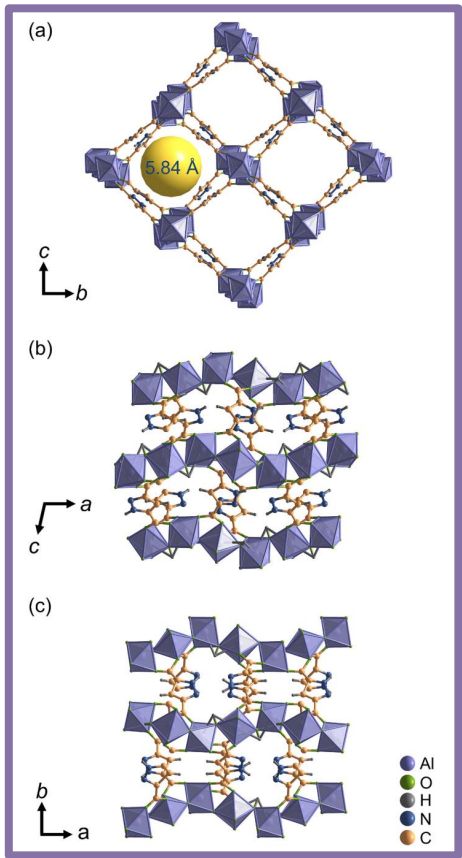


把研究成果寫成paper發表的意義

- ✓ 向世界分享資訊
- ✓ 對自己使用的研究資源有所交待
- ✓ 小小的成就感

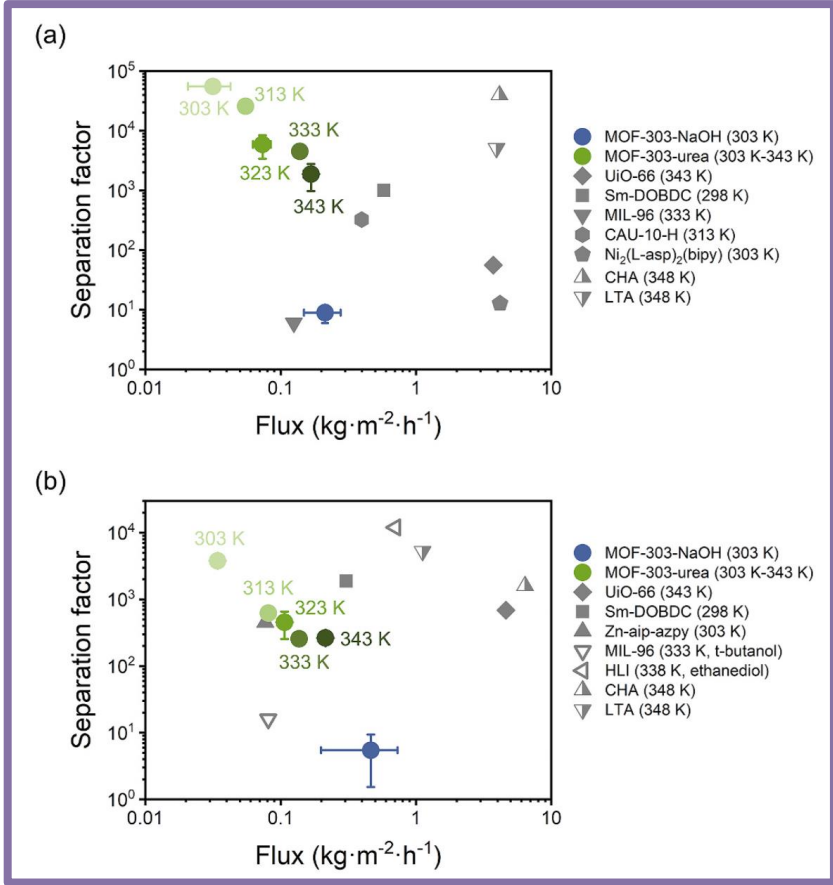
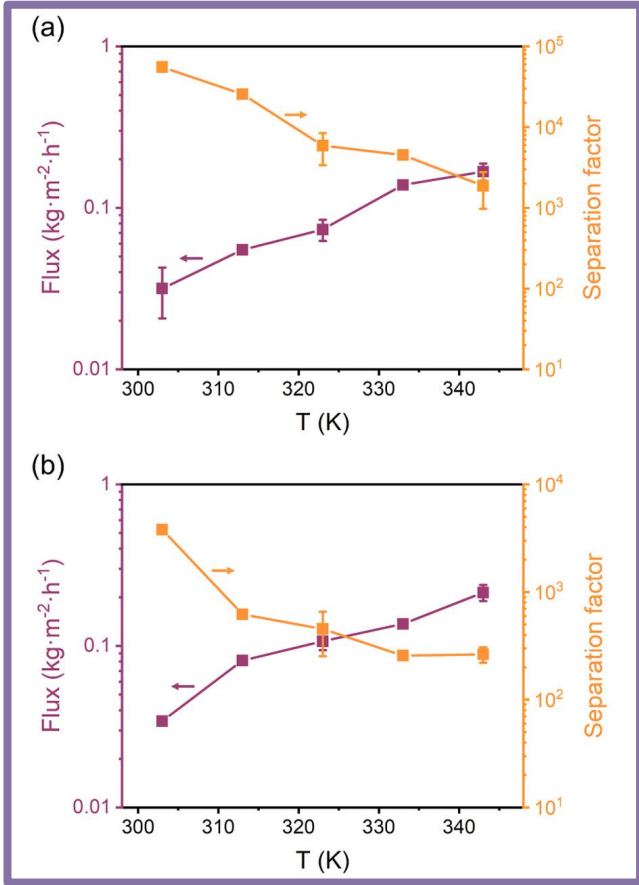
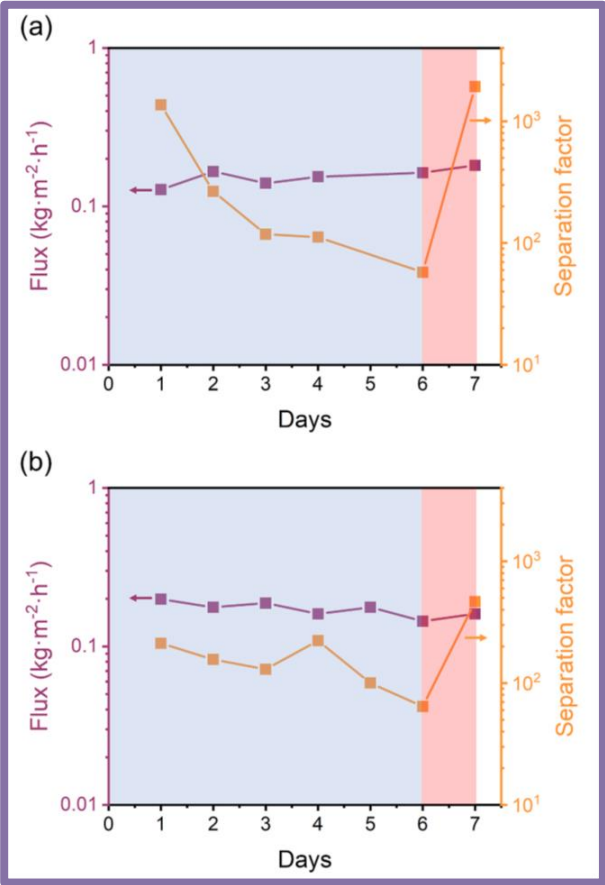


寫paper步驟1：畫圖





寫paper步驟1：畫圖





我data還不夠，
暫時無法畫圖。



我data還不夠，
暫時無法畫圖。

我data還不夠，
暫時無法畫圖。



我data還不夠，
暫時無法畫圖。

我data還不夠，
暫時無法畫圖。

我data還不夠，
暫時無法畫圖。



我data還不夠，
暫時無法畫圖。

data還缺哪些？



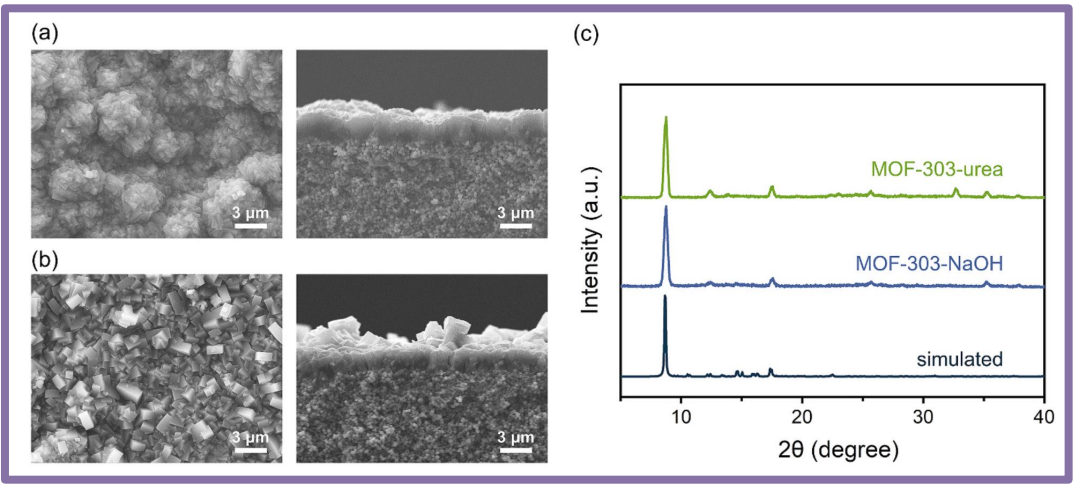
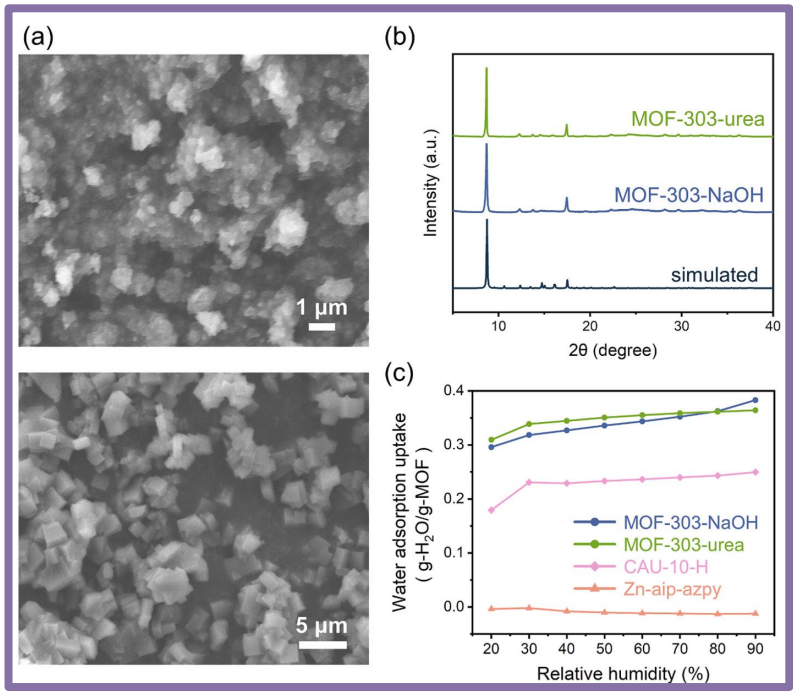
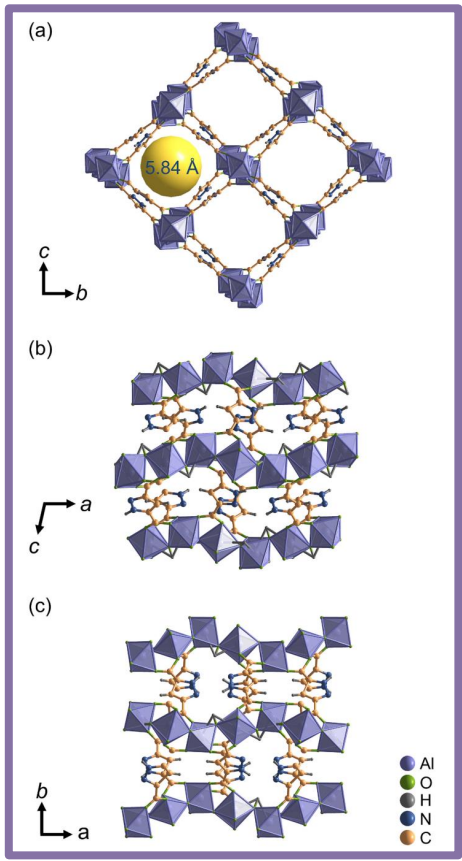
投稿步驟1：畫圖

~~先完成實驗、再畫圖。~~

先畫圖、根據圖中缺少的
data來進行後續實驗。

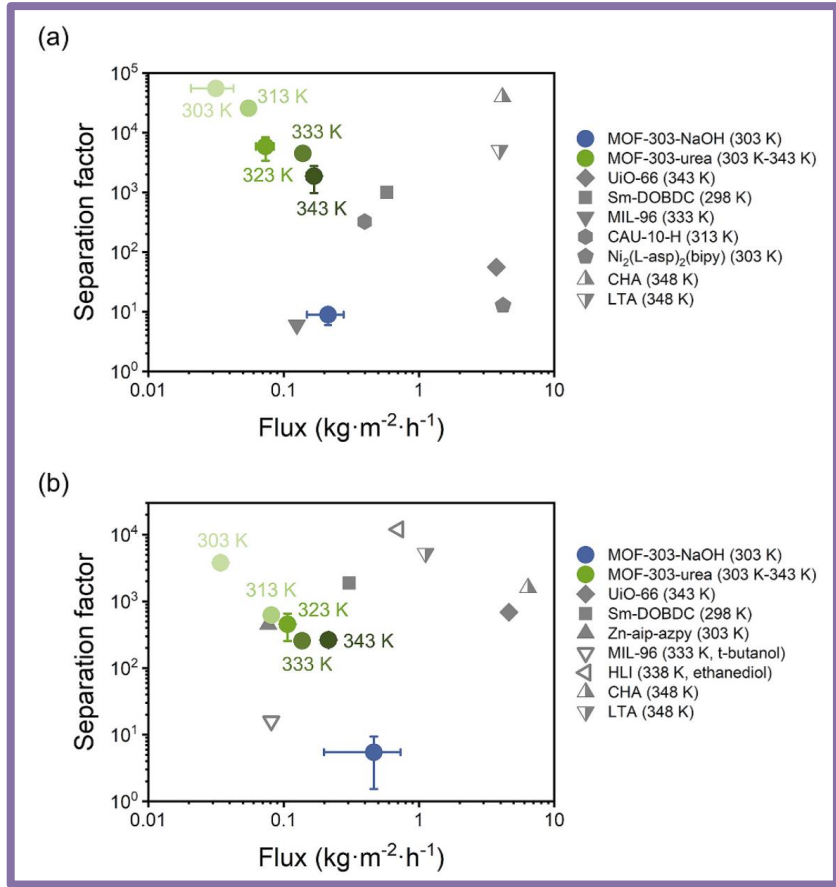
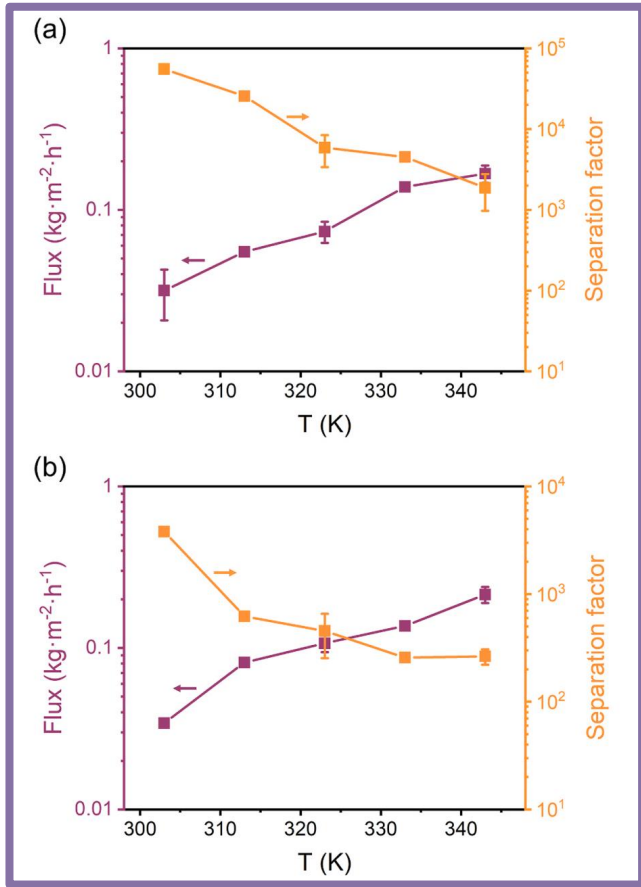
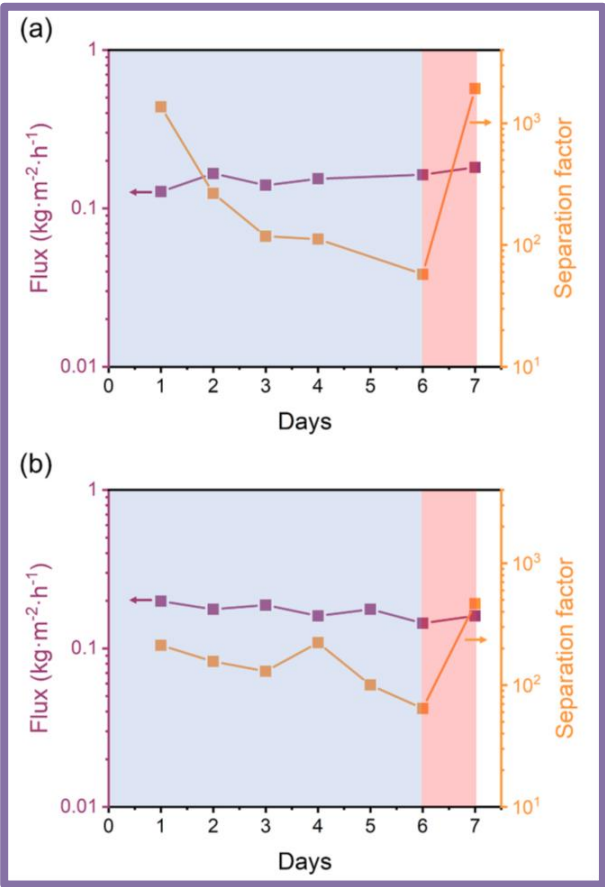


投稿步驟1：畫圖





投稿步驟1：畫圖





投稿步驟2：寫文字





投稿步驟2：寫文字



照順序寫？



投稿步驟2：寫文字





投稿步驟2：寫文字



我英文好爛…



投稿步驟2：寫文字

我英文好爛...



國立臺灣大學
雙語教育中心
CENTER FOR BILINGUAL EDUCATION
NATIONAL TAIWAN UNIVERSITY



grammarly

學生 教師 **全校性** EMI教學資源中心

Grammarly.com 英語編修軟體服務申請

Grammarly.com帳號申請說明

- 一、本服務限本校「編制專任教師」及「博士生（不含外籍選讀生、交換生）」申請。
- 二、請填寫「Grammarly.com 使用帳號申請表」完成填寫申請表格後，列印並於申請表格上簽名，附上職員 / 學生證影本，送至雙語教育中心（位於敬賢樓-第二行政大樓 523 室），或可以掃描方式傳送至 ntucbe@ntu.edu.tw，將會有同仁定時收件。
- 三、通過申請者，將收到由本中心所寄發之邀請註冊電郵（如圖示），點選「Join Now」，設定帳號（同申請表所填寫之臺大電子郵件）與密碼，即可開始使用。



投稿步驟2：寫文字

我英文好爛...



ChatGPT





投稿步驟2：寫文字



我找時間好好來寫...



投稿步驟2：寫文字



每天寫1頁A4
(double space, ~400 words)



投稿步驟2：寫文字



每天寫1頁A4 → 15~20頁
(double space, ~400 words)



Method

The metal–organic framework $[\text{Zn}_2(\text{bdc})_2\text{ted}]_n$, referred to as ZnMOF, in powder form was synthesized in accordance with a previous report [44] with minor modifications. Zinc nitrate hexahydrate (1.808 g) was dissolved in 30 mL of DMF. H_2bdc (1.632 g) and ted (0.576 g) were dissolved in another 30 mL of DMF. The two separate solutions mentioned above were mixed and agitated at room temperature for at 24 h. The solution was heated at 120 °C for 48 h. Following the reaction, white powder was formed and was collected via vacuum filtration. The product, ZnMOF in powder form, was rinsed with DMF for several times and heated at 120 °C convection oven for 24 h prior to use.

請學弟妹照著你
寫的操作一遍



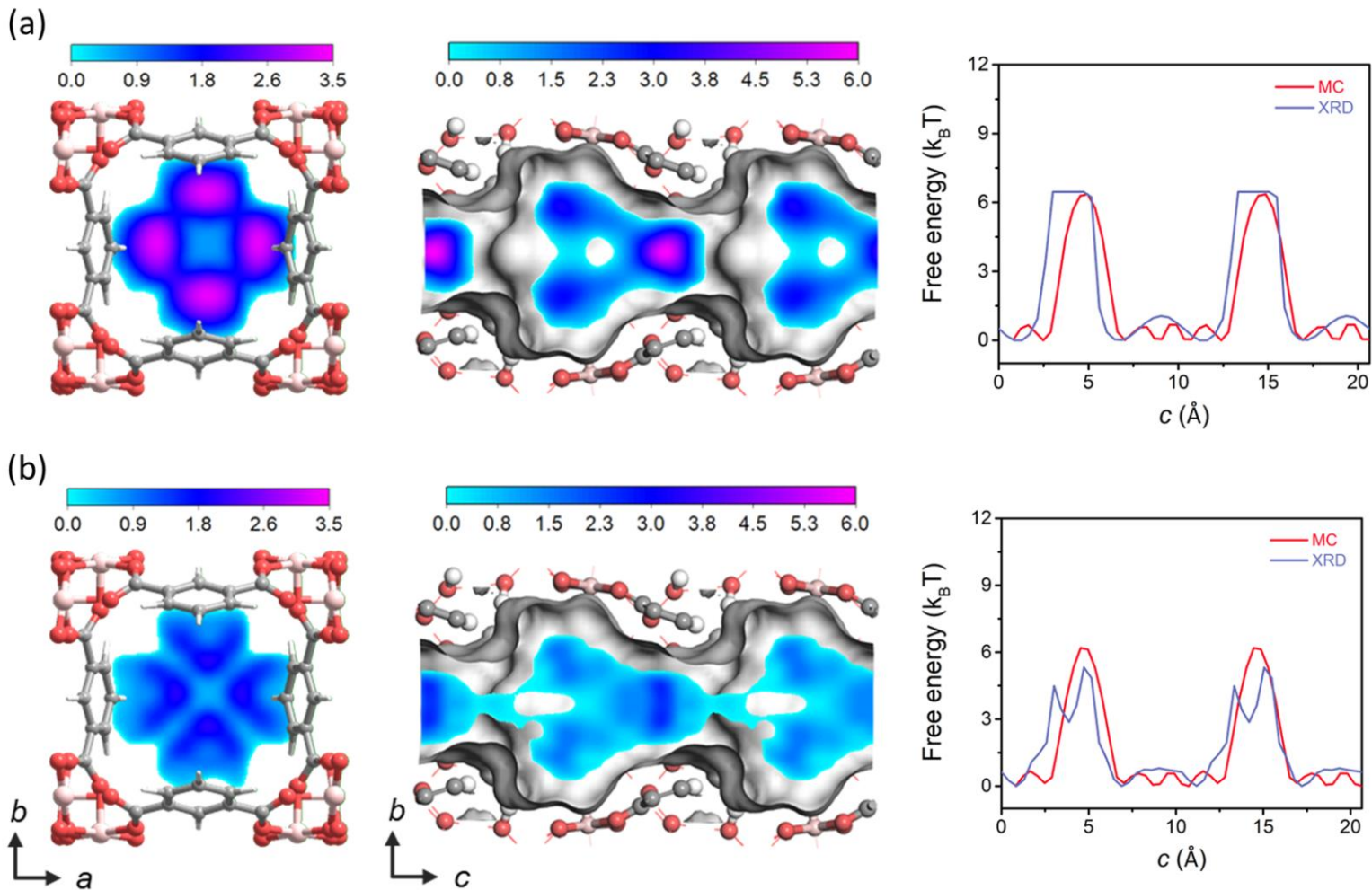
Method

X-ray diffraction (XRD) was performed using a Rigaku SmartLab SE diffractometer with Cu K α radiation operated at 40 kV and 40 mA. XRD for powder samples were recorded at a scanning rate of 5 °min⁻¹ from 5 to 40 °2 θ with a step size of 0.02 °2 θ . XRD pattern for membrane samples were obtained using the grazing-incidence method with an incident angle of 0.5°. Each of the patterns was recorded at a scanning rate of 2° min⁻¹ from 5 to 40 °2 θ with a step size of 0.01 °2 θ .



Results and Discussion

隔壁實驗室的人怎麼看？





Introduction

A材料的X應用



Introduction

A材料的X應用

過去X應用都用BCD材料，
但問題是…

X應用的重要性



Introduction

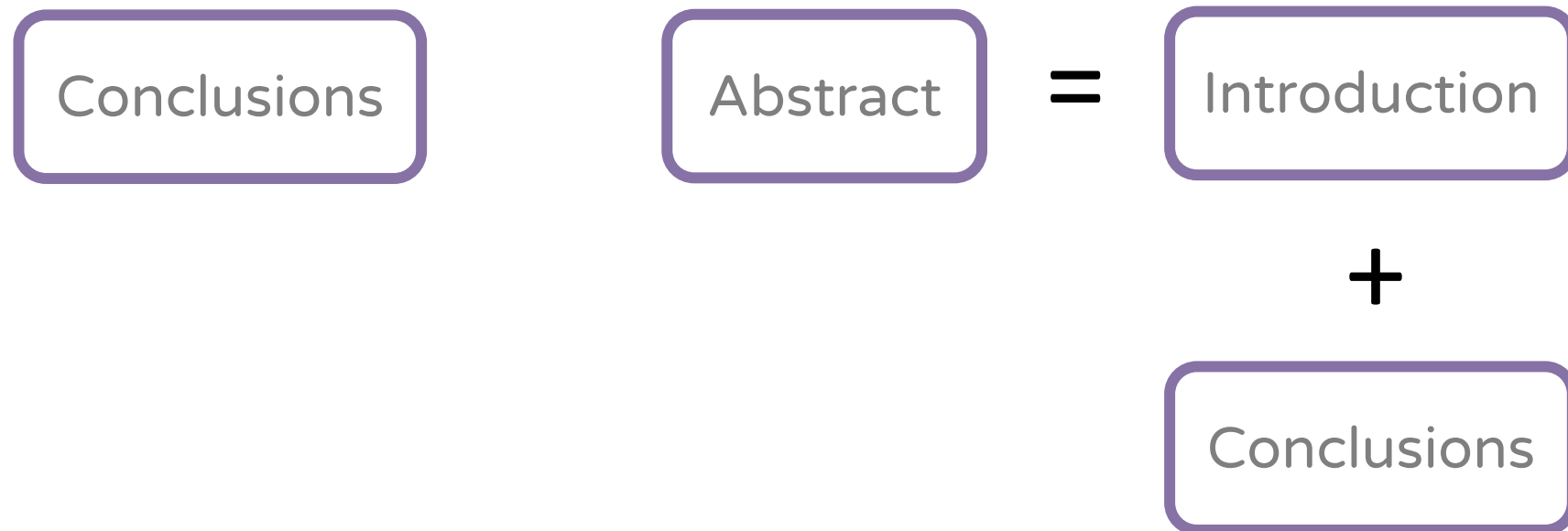
A材料的X應用

過去X應用都用BCD材料，
但問題是…

A材料在YZ的應用，
但問題是…

X應用的重要性

A材料的重要性





投稿步驟3：選擇投稿期刊

科睿唯安



Journal Citation Reports™



Journal name ▼	ISSN	eISSN	Category	Total Citations ▼	2021 JIF ▼
☐ Nature Reviews Materials	2058-8437	2058-8437	MATERIALS SCIENCE, MULTIDISCIPLINARY - SCIE	27,820	76.679
☐ Nature Energy	2058-7546	2058-7546	MATERIALS SCIENCE, MULTIDISCIPLINARY - SCIE	37,355	67.439
☐ PROGRESS IN MATERIALS SCIENCE	0079-6425	1873-2208	MATERIALS SCIENCE, MULTIDISCIPLINARY - SCIE	25,960	48.165
☐ NATURE MATERIALS	1476-1122	1476-4660	MATERIALS SCIENCE, MULTIDISCIPLINARY - SCIE	119,078	47.656

Journal name ▼	ISSN	eISSN	Category	Total Citations ▼	2021 JIF ▼
☐ ADVANCED MATERIALS	0935-9648	1521-4095	MATERIALS SCIENCE, MULTIDISCIPLINARY - SCIE	361,407	32.086
☐ Advanced Energy Materials	1614-6832	1614-6840	MATERIALS SCIENCE, MULTIDISCIPLINARY - SCIE	116,667	29.698



Journal name ▼	ISSN	eISSN	Category	Total Citations ▼	2021 JIF ▼
☐ ADVANCED FUNCTIONAL MATERIALS	1616-301X	1616-3028	MATERIALS SCIENCE, MULTIDISCIPLINARY - SCIE	194,635	19.924
☐ Nano Energy	2211-2855	2211-3282	MATERIALS SCIENCE, MULTIDISCIPLINARY - SCIE	98,948	19.069
☐ Nano Today	1748-0132	1878-044X	MATERIALS SCIENCE, MULTIDISCIPLINARY - SCIE	13,207	18.962
☐ ACS Nano	1936-0851	1936-086X	MATERIALS SCIENCE, MULTIDISCIPLINARY - SCIE	224,439	18.027
☐ Journal of Materials Chemistry A	2050-7488	2050-7496	MATERIALS SCIENCE, MULTIDISCIPLINARY - SCIE	228,406	14.511
☐ CHEMISTRY OF MATERIALS	0897-4756	1520-5002	MATERIALS SCIENCE, MULTIDISCIPLINARY - SCIE	130,194	10.508
☐ ACS Applied Materials & Interfaces	1944-8244	1944-8252	MATERIALS SCIENCE, MULTIDISCIPLINARY - SCIE	345,640	10.383



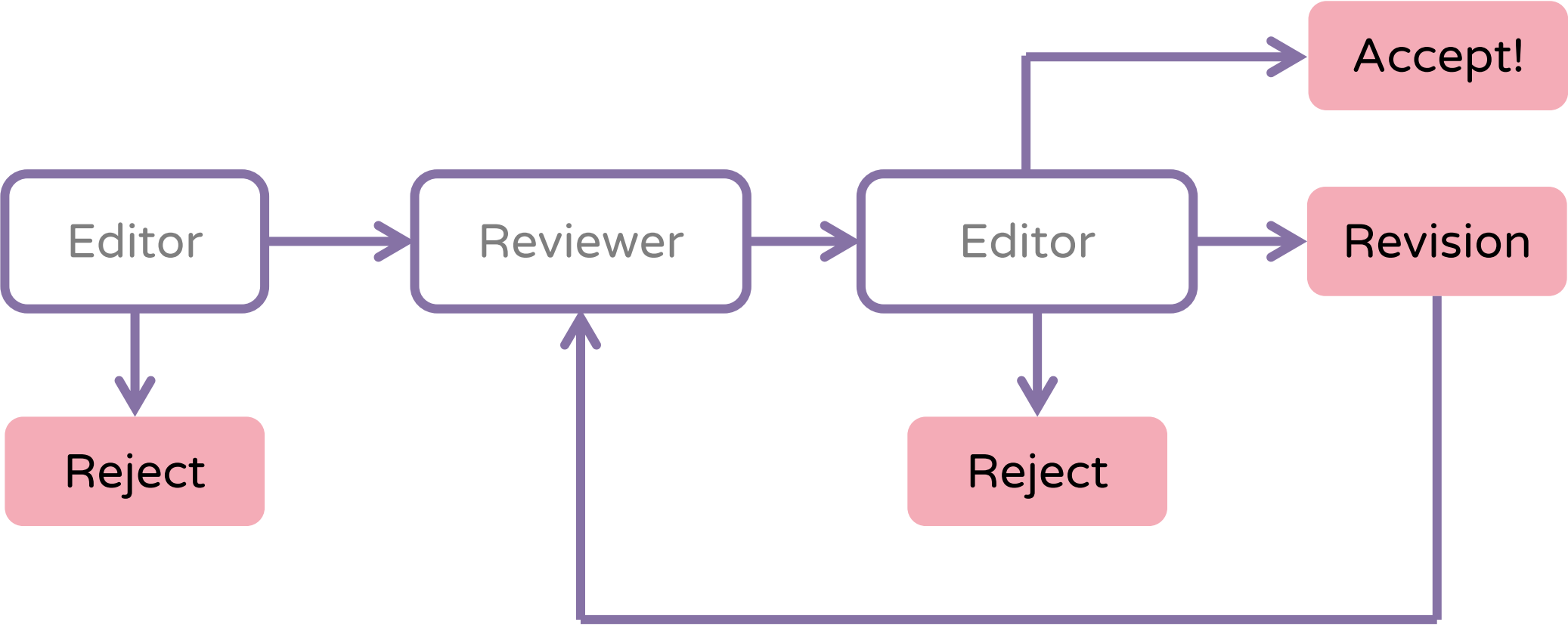
Environmental

Journal	Volume	
	Article submissions (2022)	Article publications (2022)
Environmental Science: Advances	316	62
Environmental Science: Atmospheres	174	105
Environmental Science: Nano	1096	319

Journal	Volume	
	Article submissions (2022)	Article publications (2022)
Biomaterials Science	2111	506
CrystEngComm	1602	861
Industrial Chemistry & Materials	53	0
Journal of Materials Chemistry A	10097	2162
Journal of Materials Chemistry B	2827	797
Journal of Materials Chemistry C	5554	1697
Materials Advances	1075	754



投稿步驟4：After Submission





把研究成果寫成paper發表的意義

- ☑ 向世界分享資訊
- ☑ 對自己使用的研究資源有所交待
- ☑ 小小的成就感