

ChemBox /

ChemBox

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(2017~2019) ChemBox

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ChemBox pH J J Excel ChemBox

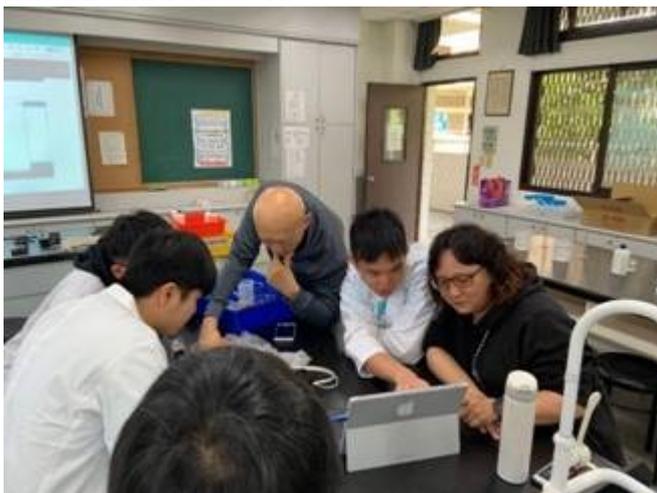
2019 7/30~8/1 8th International Conference on Network for Inter-Asian Chemistry Educators ChemBox ChemBox



▲ 2017 ChemBox & 2017 ChemBox

2017 ChemBox 2018 ChemBox ChemBox

2019 ChemBox ChemBox 3 ChemBox ChemBox 3 7 40 Youtube [7] ChemBox 8 100 STEAM (Science Technology Engineering Art and Mathematics) ChemBox ChemBox



▲ 3 2019 ChemBox

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Chemis try

□□	Arduino UNO	1□
	1.3□ I2C OLED □□	1□
	PS/2 □□	1□
□□□□□□□□	DS18B20 □□□	2□
	4.7KΩ (□□□) □□	1□
pH□	pH□□□	1□
□□□	□□□□□	1□
□□□□□	BMP280 □□□□□	1□
□□□	BH1750 □□□	1□
	RGB LED	1□



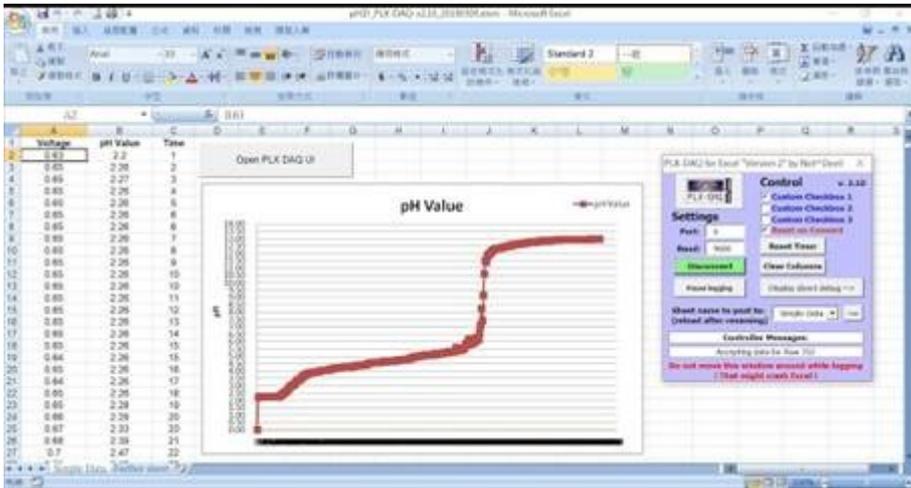
▲ 11 ChemBox

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ChemBox pH USB
 Excel (NetDevil PLX-DAQ v2.11)^[10]
 1.



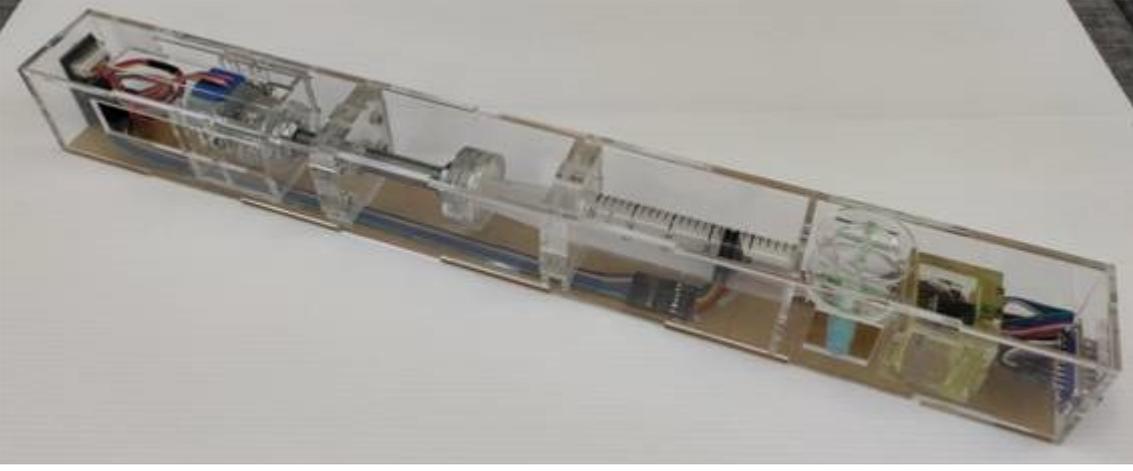
▲ 12 ChemBox ▲ 13 ChemBox



▲ 18

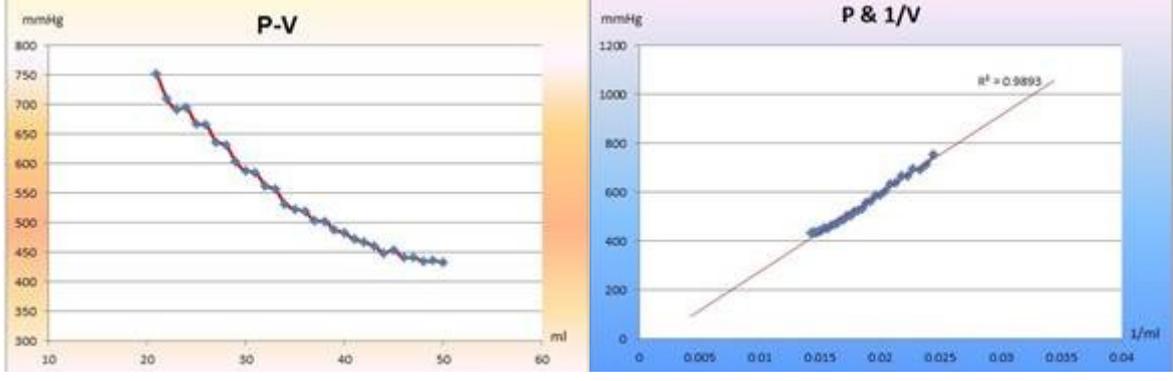
17 18 !

3.



▲ 19 2017 2019.09.05 X /NKNUBLOCK+4060

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▲ 20

▲ 21

4.

RGB LED

https://www.youtube.com/playlist?list=PLtpxq0z24EL2BwxwDwCjRocFZEV8MQIO_

8. [2019 ChemBox](#)

<https://sites.google.com/hdsh.ilc.edu.tw/chembox-8th-nice/>

9. [ChemBox](#)

<https://sites.google.com/hdsh.ilc.edu.tw/2017-chembox/>

10. NetDevil, PLX-DAQ version 2 – now with 64 bit support!
<https://forum.arduino.cc/index.php?topic=437398.0>