



**NOVA-2S** Single-mode Microwave Synthesizer

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**Simpler process » Easier work**



### NOVA-2S A Revolution in Microwave Synthesis

Synthesis - Extraction



#### Preekem

Preekem has been dedicated to microwave chemistry and sample preparation for 19 years and has been a leading supplier of these two fields in China. WX-2000 microwave digestion system is the first unit with dual control of temperature and pressure in China market. Since its launch in 2001, Preekem has developed over 20 new models including microwave digestion, microwave synthesis and automated solid phase extraction.

Preekem has the top R&D team, skilled manufacturing team, professional sales team and dedicated service team. Our products have been exported to countries and regions.

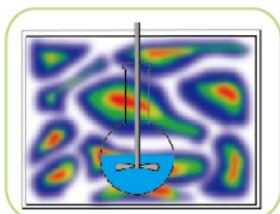
With consciousness of crisis and eagerness to innovate, Preekem aims to build one of world's top instrument brands with international advanced technology.



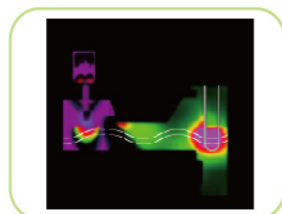
#### INNOVATION

It's a technology based on vector modeling cavity and microwave feed-in, which could focus the microwave energy on sample in a single form.

The repeatability and reliability are fully guaranteed.



Multi-mode synthesizer



NOVA-2S Single-mode Microwave Synthesizer

#### INNOVATION

The smart software, graphical interface, and multiple work mode allow divers applications. Data export is available.



NOVA-2S Single-mode Microwave Synthesizer

#### Specifications

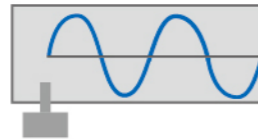
Microwave Resonant Cavity	Pressure vial: 10 mL and 30 mL Non-pressure vial: 50 mL and 100 mL
Operating Temperature	Pressure vial: 0-200°C Non-pressure vial: 0-250°C
AC Power Input	220-240V/50Hz,10A
Maximum Microwave Power Output	500W
Microwave Frequency	2450MHz
Microwave Emission Mode	Non-pulse Continuous Microwave Output
Microwave Control Mode	High Frequency Closed-loop Feedback (PID) Control
Pressure Measurement and Control System	Pressure Measurement Range: 0-40bar Pressure Measurement Precision: ± 0.1bar
Temperature Measurement and Control System	Mode: Infrared Thermo Sensor      Non-pressure Reaction System      Optical Fiber Thermo Sensor
	Range: -20-350°C                      0-250°C
	Precision: ± 1°C                      ±1°C
	Control Stability: ± 1°C                ±1°C
Touch Screen	6.4" Colorful LCD Touch Screen
Speed Rate of Raising Temperature	50-120°C/min
Quick Cooling Rate	40°C/min
Reaction Agitation	Magnetic stir speed: 1500r/min mechanical stir speed: 2000r/min
Exterior Dimension	370mm (H) × 370mm (W) × 620mm (D)
Weight	40Kg

Quality lies  
in the details!

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### Special Single-mode Microwave Cavity

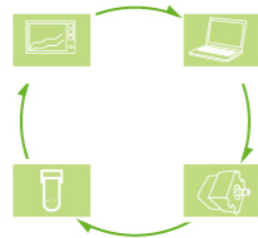
- Make use of single mode stationary wave to provide high energy overlap
- Higher energy density guarantees even heating and good repeatability



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### PID Technology

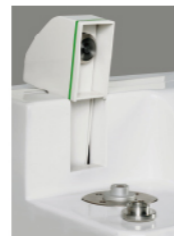
- PID technology assures accurate temperature control. The real-time temperature is shown on the LCD screen
- Due to PID control, in the synthesis process, an uninterrupted microwave power is changing according to real reaction situation, which maximize a reliable and repeatable result.



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### Safety Lid

- It secures sample inside of cavity during the whole process
- It opens after the reaction until a safe temperature and pressure
- It keeps closed during exceptional condition



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### Temperature&Pressure Dual Control

- The Infrared sensor monitor the temperature during whole reaction process
- A non-contact way to monitor the pressure during the whole process

VOCA specification  
Accuracy:  $\pm 0.02\text{mm}$   
Max speed: 200mm/s  
Sample tray capacity: 4  
Sample tray accommodation: 10 mL vial or 30mL vial  
Batch capacity: 96 (10mL); 64 (30mL)



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### Smart Software

- Colorful LCD touch screen shows every curve of the reaction process; all the settings are quickly finished with a click
- Update of the software is very easy via USB port
- Up to 300 methods and 500 data can be stored

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### Fast Cooling System ( Need Air Compressor)

- Work with air compressor, the temperature could cool down to R.T in several minutes
- Reduce the possibility of side reaction

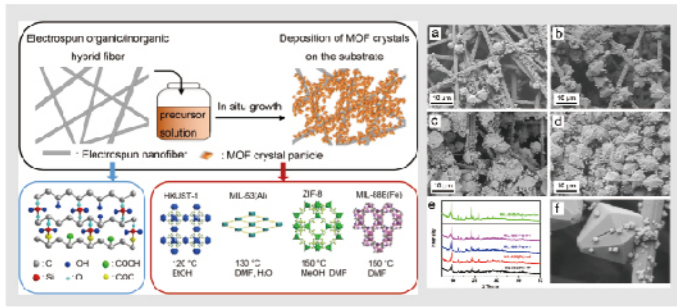
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### Atmospheric Pressure Work Mode

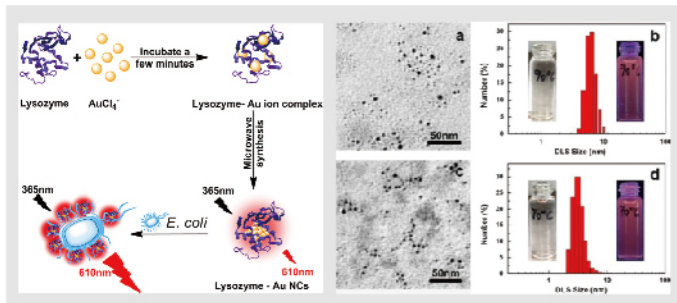
- 100mL reaction bottle
- Reflux condensation / gas shield mode (option)
- Mechanical stirring system (option)



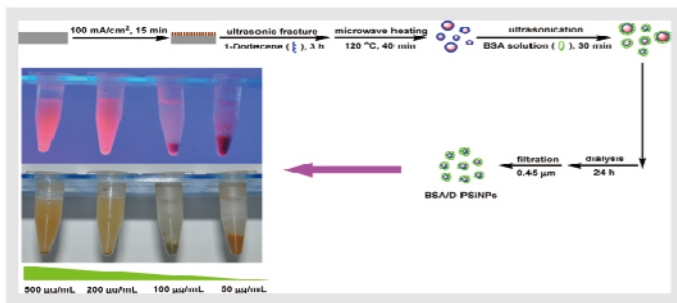
## Application Notes



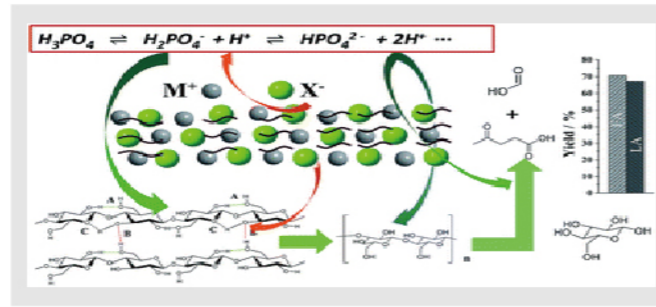
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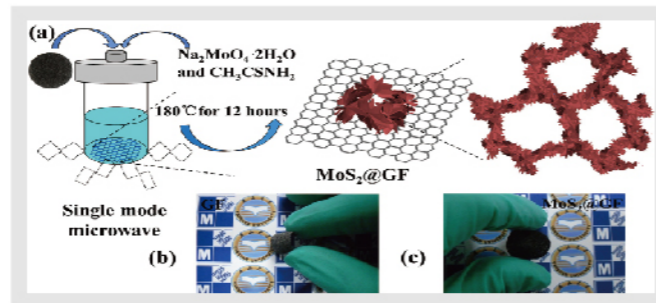
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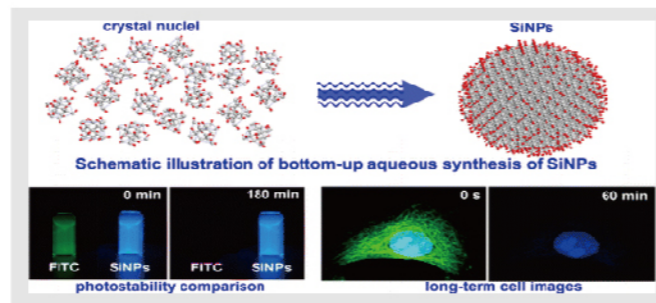
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## NOVA-2S Vial Specification

Item	Closed type vial 10mL	Closed type vial 30mL	Atmospheric pressure vial	Atmospheric pressure vial
Volume	10mL	30mL	55mL	100mL
Material	Pyrex Glass	Pyrex Glass	Glass	Glass
Working Temperature	200°C	200°C	250°C	250°C
Working Pressure	20 atm	20 atm	NA	NA

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