

AVA Software

Jacketed Lab Reactor Control



One Software.
Any Reactor.
Effortless Automation.



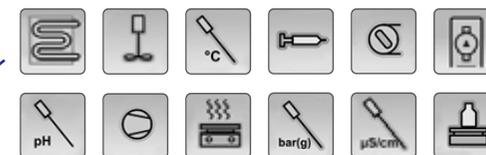


One software.
Two platforms.

Control your Jacketed Lab Reactor

Subscription free automation

Connect multiple devices from leading manufacturers



Subscription
FREE
Software

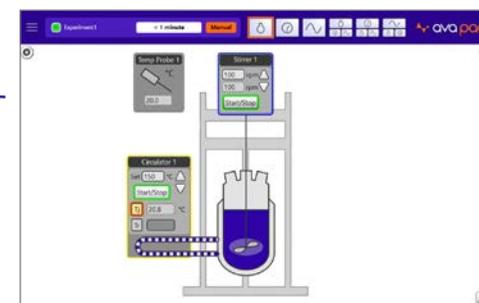
ava pad



ava pc



Control devices directly via the apparatus window



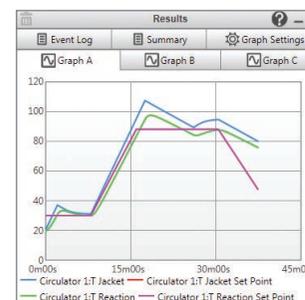
AVA Pad Apparatus Window

Create detailed reports and share data



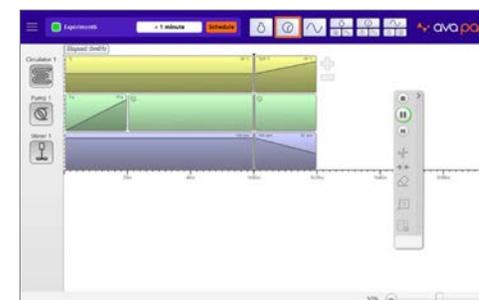
AVA PC Report Wizard

View process data in real-time graphs



AVA PC Graph Window

Schedule window to create experiment profiles

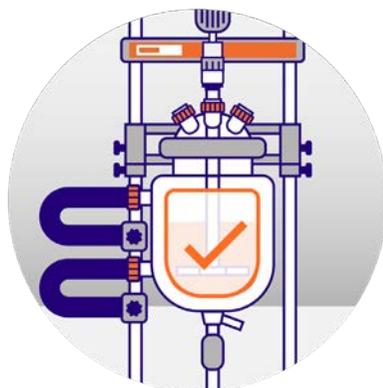


AVA Pad Schedule Window



Boosts productivity by reducing manual tasks

Automate routine or complex operations to free up valuable user time and streamline workflows.



Enhances process safety and control

Improved operator safety through built-in alarms and constant monitoring to keep reactions under control.



Enables precise, repeatable reaction control

Automated dosing with real-time feedback increases accuracy, reproducibility and minimises human error.



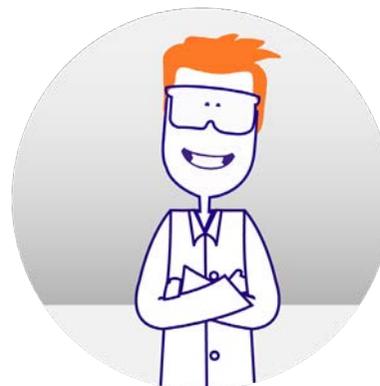
Control multi-device reactions

Effortlessly integrates with any jacketed lab reactor for safe and precise automated reaction control and data logging.



Proven success worldwide

Over 350 systems installed around the world. Trusted by top pharmaceutical companies.

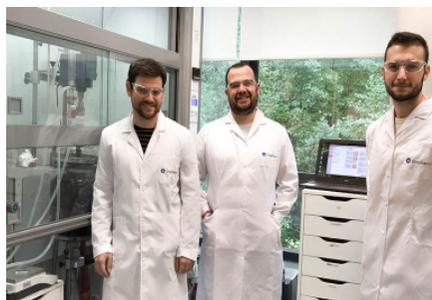


Expert support at every step

Our experienced team offers practical advice to help accelerate your chemistry.

Why choose AVA to automate your Jacketed Lab Reactor?

Why choose AVA Jacketed Lab Reactor Control?



AVA helped increase batch-to-batch reproducibility at Graphenea

“In a chemical reaction, many parameters impact the final product - the raw materials, temperature, reaction time, addition time and the order in which chemicals are added. With AVA software, all these parameters can be controlled with a single program in a simple way. When batch to batch reproducibility is needed, automating the chemistry is crucial.”

Beatriz Alonso, Research Chemist, Graphenea, Spain



AVA software aided process safety and design at Sai Life Sciences

“The AVA software is really helpful because it allows us to program the chemistry, to be able to operate those chemistries in the Reactor-Ready and it gathers all of the relevant process data, which actually helps us to understand about the process safety and start to think about how we need to design our process.”

Andrew Kennedy, Vice President & Site Head, Sai Life Sciences



AVA gave chemists at Lubrizol the freedom to work on other things whilst reactions are running

“We can now continue to run reactions overnight, rather than stopping and restarting the following day, which would mean deviating from any potential manufacturing processes. A reaction that could take up to a week can now be completed in a 24-hour period. Our reproducibility has also increased massively since using AVA software, which has saved us time and money.”

Emma Playfoot, Experimental Chemist, Lubrizol

Some of our valued customers



It's easy to work with AVA

6 simple steps

1. Select your platform
2. Connect your devices
3. Configure your system
4. Control your reactor
5. Collect your data
6. Share your results



1. Select your platform



AVA Pad Reactor Controller

Compact all-in-one controller

Cat No	RR20230
Device Connectivity	Integrated
User Interface	10" Touchscreen
Multiple Reactor Control	No

Suitable for

- Single Reactor
- Dual Reactor

10" Touchscreen

- Graphical display
- Pinch zoom
- Supports USB keyboard & mouse

User Management

- Multiple user profiles
- Password protection per user



Subscription
FREE
Software

ava pad

Integrated connections

- RS232 x 4
- Temp sensor ports x 2
- USB x 2
- Ethernet x 1
- HDMI Output x 1



Fumehood compatible with two mounting options

- Control Pad Benchtop Stand
- Control Pad Support Rod



AVA PC Reaction Control Software

PC based software

Cat No	RR20308
Device Connectivity	Via separate hub
User Interface	Laptop PC
Multiple Reactor Control	Yes - up to 4

Suitable for

- Single Reactor
- Dual Reactor
- Multiple reactors (up to 4)

Laptop PC Controller

- Full keyboard
- 16" LCD Display

User Management

- Single user software
- Single password protection



Subscription
FREE
Software

ava pc

Separate Data Hub connections

- RS232 Ports x 4
- Temp sensor ports x 2
- Ethernet x 1



External to fumehood

- Remote connection to Data Hub via ethernet cable

Download
FREE
Software
www.radleys.com

2. Connect your devices



3. Configure your system



Connect up to 16 devices

Supports all leading manufacturers

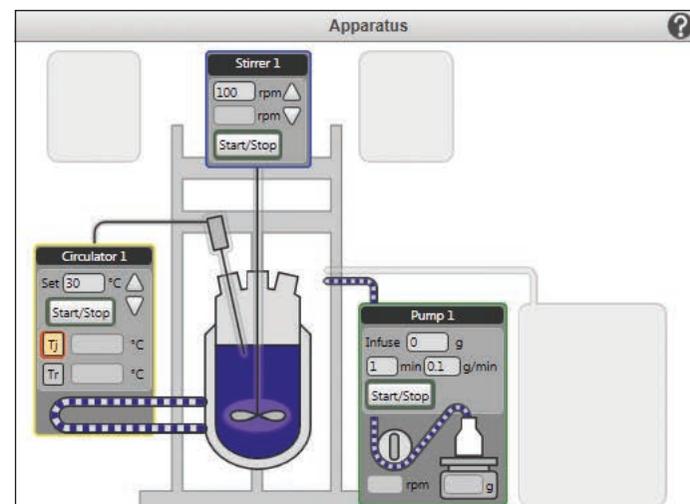
- Circulators
- Overhead Stirrers
- Temperature Sensors
- Syringe Pumps
- pH Sensors
- Peristaltic Pumps
- Piston Pumps
- Balances
- Vacuum Pumps
- Gas Flow Controllers
- Stirring Hotplates
- Pressure Sensors
- Conductivity Sensors
- Gas Flow Meters



and more...

Configure your reactor

Link devices for advanced control



AVA PC Apparatus Window

Intuitive graphical interface to:

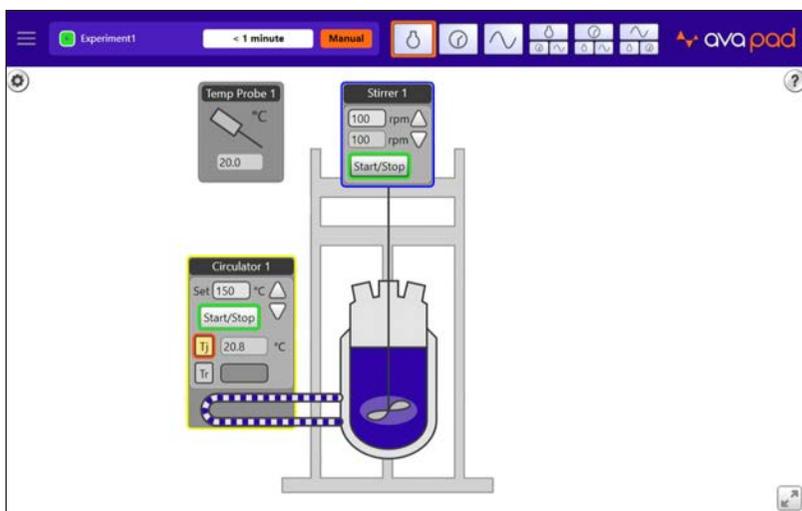
- Assign device location
- Set or modify parameters and individual safety limits
- Select and rename devices
- Link devices for dual control e.g. pump and balance for gravimetric additions
- Set global emergency safe conditions or reaction shut down



4. Control your reactor

Manual Control

Direct control with tracked changes



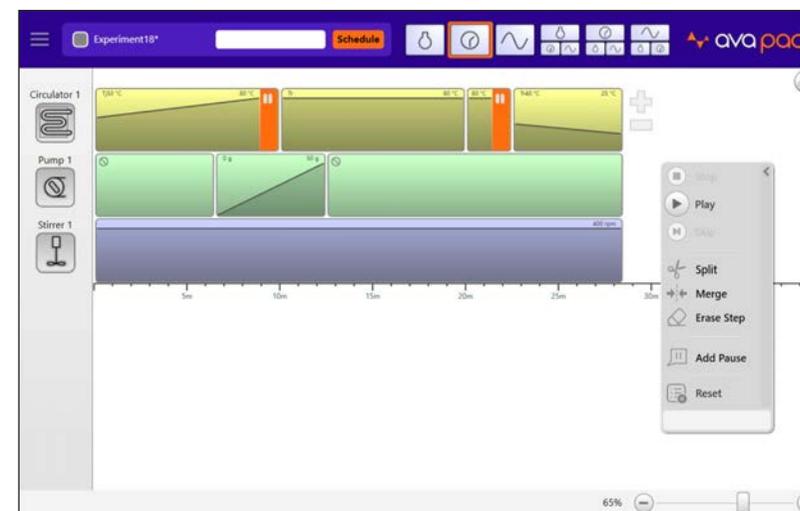
AVA Pad Apparatus Window

Full reactor control from the Apparatus Window

- Manually control with confidence thanks to continuous safety monitoring and alarms
- Make changes as you go
- AVA records what you do, as you do it

Schedule Control

Experiment profiles with ramps and timed actions



AVA Pad Schedule Window

Automate your process from start to finish

- Create ramps, plateaus and timed actions
- Define step end conditions on multiple parameters
- Assign safety feedback loops to individual steps e.g. control addition by process temperature
- Modify, stop, pause or skip steps
- Add user prompts and add notes into the event log

5. Collect your data

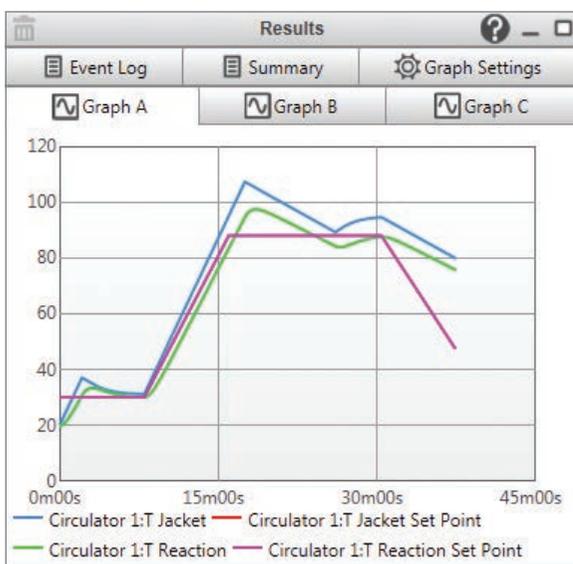


6. Share your results



View real-time graphs

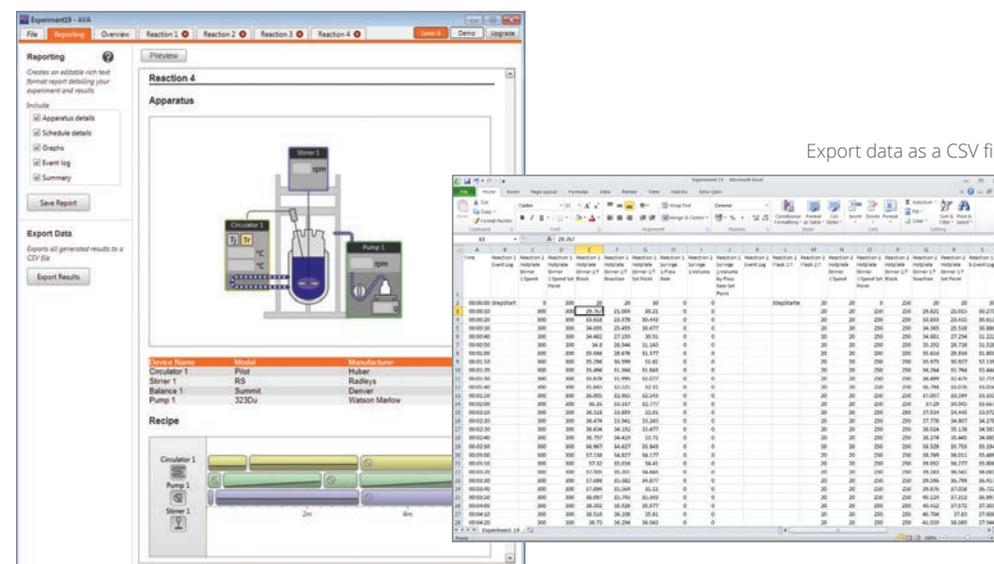
Automated logging of all process parameters



AVA PC graph view

Create reports

Detailed reports in just a few clicks



Export data as a CSV file

AVA PC report wizard

See your data clearly and easily

- Define what to display on the graph
- Zoom in to closer inspect
- All parameters are recorded even if not displayed
- View the event log and add comments

Report wizard makes sharing easy

- Choose which sections to include
- Save reports in a rich text format
- Export all data as a CSV file
- Share experiments with other AVA users

ava pad - Ordering Information



AVA Pad Reactor Controller

'Anytime' Upgrade

AVA Pad 'Anytime' Software Upgrade

Compact 10" Touch Screen all-in-one Reactor Controller

Upgrade to the latest version of the AVA Pad Software

Cat No	RR20230	RR20235
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Control Pad Benchtop Stand



Control Pad Support Rod



Boss head 15-25mm, 8-12mm

To raise the Pad and provide adjustable viewing angle

To mount the pad directly on the reactor framework

Mounting boss for use with RR20512 Control Pad Support Rod

Cat No	RR20510	RR20512	RR20518
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ava pc - Ordering Information



AVA PC Reaction Control Software Kit

AVA PC Reaction Control Software, Laptop Controller, 4 Port Data Hub & 1 Year AVA Care Support
Cat No RR20308



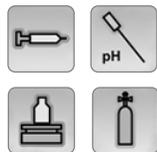
AVA PC Reaction Control Software only

AVA PC Reaction Control Software with 1 Year AVA Care Support
Cat No RR20114

1 Year AVA Care

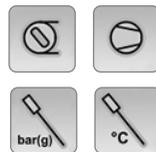
AVA Care Support

AVA Care Support for PC Reaction Control Software - 1 Year
Cat No RR20144



Driver Configuration Existing Category

Driver Configuration Service - Existing Device Category
Cat No RR20217



Driver Configuration NEW Category

Driver Configuration Service - New Device Category
Cat No RR20220



Laptop Controller

Laptop Controller
Cat No RR20250



Data Hub 4-port

For the addition of more devices
Cat No RR20200



Ethernet Switch

To connect more than one Data Hub
Cat No RR20454



Ethernet Cable

Straight through 3 m
Cat No RR20212



4-port USB Hub

To connect more than one USB device
Cat No RR20458

Software Automation Module - Ordering Information



**pH
Module**



**Syringe Pump
Additions Module**



**Gravimetric
Additions Module**



**Vacuum
Pump Module**

For the monitoring and logging of pH. Can be used for pH control when combined with an additions module.

For controlled, automated liquid dosing (by volume). Ideal for smaller volumes.

For controlled, automated liquid dosing (by mass). Ideal for larger volumes or continuous additions.

For controlled, automated vacuum control. Optimise distillation and solvent removal automatically.

Cat No	RR20502	RR20504	RR20500	Cat No	RR20506
Dosing	pH control (acid or base dosing) possible with the addition of a syringe or peristaltic pump	0.1 µl - 60 ml	up to 5 L	Chemical Resistance	PTFE diaphragms, ETFE / carbon-fibre reinforced covers, FFKM valves, PTFE gas flow paths etc.
Flow Rate	n/a	up to 35 ml/min	up to 4000 ml/min	Vacuum	Ultimate vacuum - 2.0 mbar absolute
Continuous	n/a	No	Yes	Pump Speed	2.0 m ³ /h
Includes	pH meter, cables and adapters (pH probe not included)	Syringe pump, tubing, cable, adapters	Peristaltic pump, balance, cables, tubing, adapters, bottle	Includes	Chemistry diaphragm pump, cables, vacuum hose, gas purge adapter
Safety	Safety feedback loops can be incorporated within the AVA software to minimise exotherms.				

Overhead Stirrer - Ordering Information



Refer to
Reactor-Ready
Flex Component
Catalogue for
more product
details



**Hei-TORQUE
Ultimate 200**



**Hei-TORQUE
Ultimate 400**



**RS232
Data Cable**

	Powerful stirring for a wide range of volumes and viscosities with software control and ramping options	Most powerful stirring for demanding applications with software control and ramping options	Hei-TORQUE RS232 Interface Cable - 9pin to 9pin
Cat No	501-62020-00	501-64020-00	14-007-040-72
Torque	200 Ncm	400 Ncm (2 gears)	n/a
Speed Range	10 - 2000 rpm	10 - 400 rpm and 20 - 2000 rpm	n/a
Software Control	Yes (RS232 and USB)	Yes (RS232 and USB)	n/a
Weight	5.1 kg	5.3 kg	n/a

**A choice of popular
PTFE stirrer paddles
are available**



Anchor



Retreat
Curve



Turbine or
Propeller

Circulator - Ordering Information



Refer to Reactor-Ready Flex Component Catalogue for more product details



Huber CC-K6



Huber Ministat 230



Huber Ministat 240



Huber Petite Fleur



Huber Unistat Tango



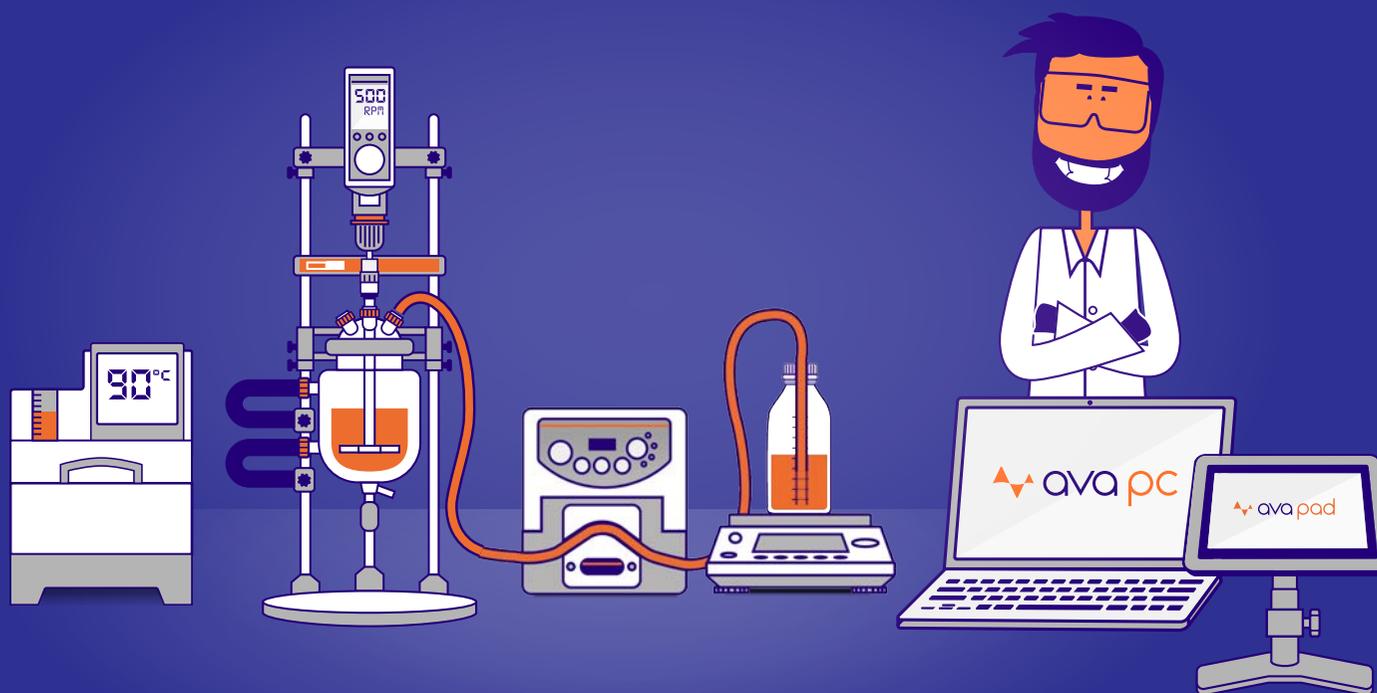
RS232 Data Cable

	Compact open bath unit suitable for small vessels	Open bath unit with good heating and cooling capability	The most popular Ministat, powerful and compact temperature control for small to medium vessels	The smallest Unistat, rapid temperature control for medium sized vessels	Unistat with powerful heating and cooling, suitable for vessels up to 5 L	Huber Control Cable (3m) RS232 / PC
Cat No	HB2008.0005.01	HB2015.0005.01	HB2016.0005.01	HB1030.0001.01	HB1000.0037.01	HB55018
Temperature Range	-25 to +200 °C	-40 to +200 °C	-45 to +200 °C	-40 to +200 °C	-45 to +250 °C	n/a
Example Performance (Process Temperature)	1 L vessel: 20 °C to 150 °C in 38 min 150 °C to 20 °C in 117 min	500 ml vessel: 20 °C to -20 °C in ~ 30 min -20 °C to 150 °C in <30 min	2 L vessel: 100 °C to -20 °C in 95 min -20 °C to 100 °C in 40 min	1 L vessel: 20 °C to 150 °C, then cool to 0 °C in <120 min	2 L vessel: 20 °C to 180 °C, then cool to 20 °C in ~ 60 min	n/a
Heating capacity	1.6-2.1 kW	1.6-2.1 kW	1.8-2.1 kW	1.6-2 kW	3 kW (16 A power supply)	n/a
Cooling capacity	0.15 kW @ 0 °C	0.38 kW @ 0 °C	0.55 kW @ 0 °C	0.45 kW @ 0 °C	0.70 kW @ 0 °C	n/a
Connections	M16	M16	M16	M16	M24	n/a
Software Control	Yes (RS232 and USB)	Yes (RS232 and USB)	Yes (RS232 and USB)	Yes (RS232 and USB)	Yes (RS232 and USB)	n/a

Accelerating chemistry

Radleys provide innovative productivity tools helping chemists discover amazing things. Chemistry equipment for safer, cleaner, greener and more productive chemical research.

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