# INDIRA JAYAWEERA

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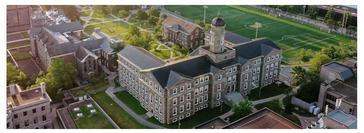
Received a BS in Chemistry from the University of Colombo in Sri Lanka in 1983

Received a Ph.D. in Chemical Kinetics from the University of Dalhousie, Canda in 1989



## UPBRINGINGS / CAREER

It is predicted that Dr. Jayaweera chose to obtain her PhD from Dalhousie for a few reasons. The most probable reason for her journey to Canada was to be exposed to different scientific perspectives, cultures, and methodologies.

After obtaining her Ph.D. from Dalhousie, she went straight into industry at SRI International. Since then, she has continued working at SRI, where she made significant contributions to the development of environmental tech.

She is now the director of the Carbon and Water Management lab where she focuses on CO2 capture, water purification, and hydrocarbon recovery from petroleum. Dr. Jayaweera also became a SRI Fellow in 2017, because of her leadership and contributions to SRI International.

## TRUSTY COMPANION

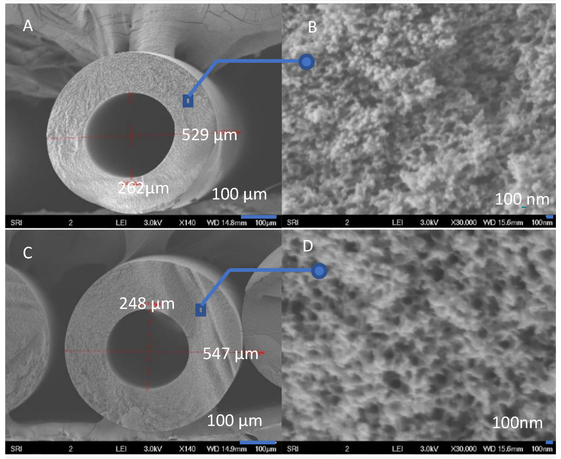
Dr. Indira Jayaweera and her husband Dr. Palitha Jayaweera have a professional relationship alongside their relationship. This is surprisingly interesting as most personal relationships don't align as well as theirs. They have worked on numerous projects together as Dr. Indira focuses on the chemical processes and her husband focuses on the material science aspects.

## INTERNATIONAL IMPACT

Dr. Indira Jayaweera was awarded the "Golden Award" by the Japanese Government because of her significant role in the development of the Assisted Hydrocarbon Oxidation (AHO) technology.AHO helps contribute to a sustainable environment, and there is a full size plant using this technology in Japan

## CONTRIBUTIONS

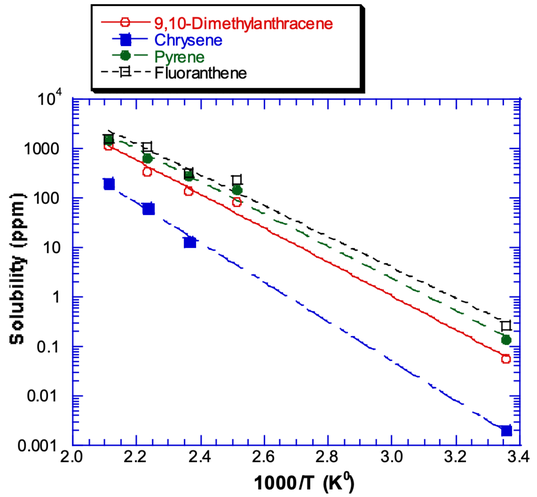
**Figure 4.** The cross-section morphology of PBI HFs with air gap of (**A**,**B**) 0.5″ (1.3 cm) and (**C**,**D**) 4″.




(WANG, X. ET. AL., MEMBRANES, 2018),

One of Dr. Indira's major contributions is her advancements in water purification technology techniques. Her lab developed Polybenzimidzaole Hollow Fiber membranes for Reverse Osmosis. They create this fiber with the aid of a spinning jet and by changing the air gap they can control pore sizes. The figure to the left shows the difference between two sets of membranes with different air gaps. While there were dramatic differences in pore sizes, the changes in wall thickness were not significant. They found that increasing the spinning air gap increases the rejection rates, but also decreases the flux through the membranes. Additionally, they found their membranes have higher rejection rates at an acidic pH.

Aside from water purification, Dr. Indira Jayaweera is also known for her work in carbon capture and hydrocarbon recovery. The figure to the side shows her impact within the hydrocarbon recovery field. This paper focuses on polycyclic aromatic hydrocarbons and how they can be effectively recovered from the soil. While there are already treatments and techniques for this issue, they are expensive or ineffective. Dr. Jayaweera and her team found that the solubility of PAHs increases with increasing temperature under hydrothermal conditions and changes in water's properties. This was seen as the solubility for all test compounds increased as a function of temperature.




(JAYAWEERA IS, MARTI-PEREZ M, DIAZ-FERRERO J, 2002).

## LAB PHONE RING

You used to call me on my.
You used to you used to

You used to call me on my lab phone
Late night when you need my science
Call me on my lab phone
Late night when we defy compliance
And I know when that lab phone ring
It can only mean one thing
I know when that lab phone ring
It can only mean one thing

Late night in Colombo, under that light,
Mixing up chemicals, got the ratios right.
Said you're dreaming of the future, not any sight,
But where your experiments could make the world bright.
Remember when we couldn't get the reaction to go,
Now we're innovating, got that sustainable flow.
Dalhousie to Cali, always on the move,
Chasing that green dream, got something to prove.

You used to call me on my lab phone
Late night when you need my advice
Call me on my lab phone
Late night when we chase the Prize
And I know when that lab phone ring
It can only mean one thing
I know when that lab phone ring
It can only mean one thing

Cause ever since we moved to Cali, we, we, we
We started working at SRI
Doing all this work for humanity
Green techs is your reality
From the west side, now your spreading light,
In the lab, we're collecting carbon samples
Materials and chemistry, we're doing it right,
Your solutions are spreading out

You used to call me on my lab phone
Late night when you need my help
Call me on my lab phone
Late night when things failed
And I know when that lab phone ring
It can only mean one thing
I know when that lab phone ring
It can only mean one thing

These days, all I do is
Wonder if you're innovating on the greener quest
Wonder if you're taking your team to great success
Capturing carbon like you did, getting awards at every step
You don't need no one else
You have always outdone yourself
and kinetics is your thing
How you purify water so well
Made a plant in Japan now who's next
You was in the zone, yeah
You always been yourself
Now you 're inspiring everyone else

You used to call me on my lab phone
Late night when you need my help
Call me on my lab phone
Late night when things failed
And I know when that lab phone ring
It can only mean one thing
I know when that lab phone ring
It can only mean one thing

## REFERENCES

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