

# Blog Interview

## Green Solutions FOR PREVENTING CORROSION

Muttenz, April 30, 2021 – Clariant is delighted to announce that Dr. Nihal Obeyesekere, Head of Global Innovation Integrity Management for Business Unit Oil and Mining Services, has won the 2021 NACE Fellow Honor from the Association for Materials Protection and Performance (AMPP). This honor recognizes the field's most distinguished contributors to the understanding and prevention of corrosion. Nihal will now join the forum of technical and professional leaders that serve as AMPP advisers.

In our interview, Nihal tells us more about his accomplishments so far - and how he's working together with Clariant to bring sustainability to the field of oilfield corrosion.

### **Nihal, why is understanding corrosion and its prevention so important?**

Everything that is metallic corrodes, and the oil and gas industry spends approximately 1.37 billion dollars a year trying to prevent the damage this causes. As part of Clariant's focus on sustainability, we want to provide solutions – in this case corrosion inhibitors – that help our customers reduce the costs of corrosion by using environmentally benign corrosion inhibitor products. This isn't just a question of cost either. Corrosion inhibitors are critically important for maintaining the safety of pipelines and avoiding accidents!

### **What do you consider your most significant contributions to the field so far?**

My biggest contribution has been that I'm trying to do my part to make our environment a little safer and a little greener for our next generation. Over the past 30 years, I've been dedicated to making chemicals and product lines more environmentally friendly and sustainable. This goal fits perfectly with Clariant's priorities and sustainability goals. For example, during my time here we've developed an improved product line that's safer, more cost effective, and also environmentally benign.

### **What other solutions have you developed at Clariant?**

I've done a lot of work on deep-water corrosion inhibitors, especially for extremely high temperatures and pressures. This is particularly challenging because most water-soluble organic chemicals aren't stable under these conditions. It's also hugely important because failures in deep-water pipelines can lead to environmental disasters. One of our newest corrosion inhibitors is highly effective at 200 °C for up to two months at extremely high downhole pressures. In addition, it's biodegradable and the starting raw materials are environmentally friendly.

**What have been some of the largest challenges you've faced in the field of preventing corrosion?**

A current serious challenge for the oil and gas industry is the high sour systems (hydrogen sulfide), which are very corrosive and can cause fatal accidents. One of my greatest successes has been starting the NACE Technical Exchange Group 282x: Sour (H<sub>2</sub>S) corrosion. When I joined National Association of Corrosion Engineers in 1999, the association didn't have a technical exchange group for sour corrosion, and this was one of the major areas of my daily work. I started the Technical Exchange Group 282X so that scientists and engineers could exchange ideas about how to understand sour corrosion better, develop new testing protocols, how to develop safer working environments around H<sub>2</sub>S, and how to handle really bad situations like leaks of H<sub>2</sub>S in the field. Since then, we've met every year for last twenty years. We have started a symposium for this topic too. It's one of my biggest success stories because, even today, after nearly 20 years, it's one of the largest and highly attended technical exchange group in NACE.

**What are a few highlights of the work that you presented at the NACE CORROSION 2021 Virtual Conference?**

One of my current focuses is robotics in combinatorial chemistry, which we believe will be the future for the industry. Combinatorial chemistry has been around for almost 30 years, but the oil industry hasn't picked up these methods as innovation tools. We have a new, state-of-the-art High Throughput Experimental laboratory (HTE) in our headquarters located in The Woodlands, TX, which can apply combinatorial chemical ideas for corrosion control in a much more refined way. We're now programming robots to blend and test thousands of corrosion inhibitor chemicals within a few days. This is much more efficient than any conventional approach. We are performing 21st century technology to solve today's corrosion problems, successfully.

We have published our findings in NACE 2021 Virtual Conference, where the paper was well received by the NACE community.

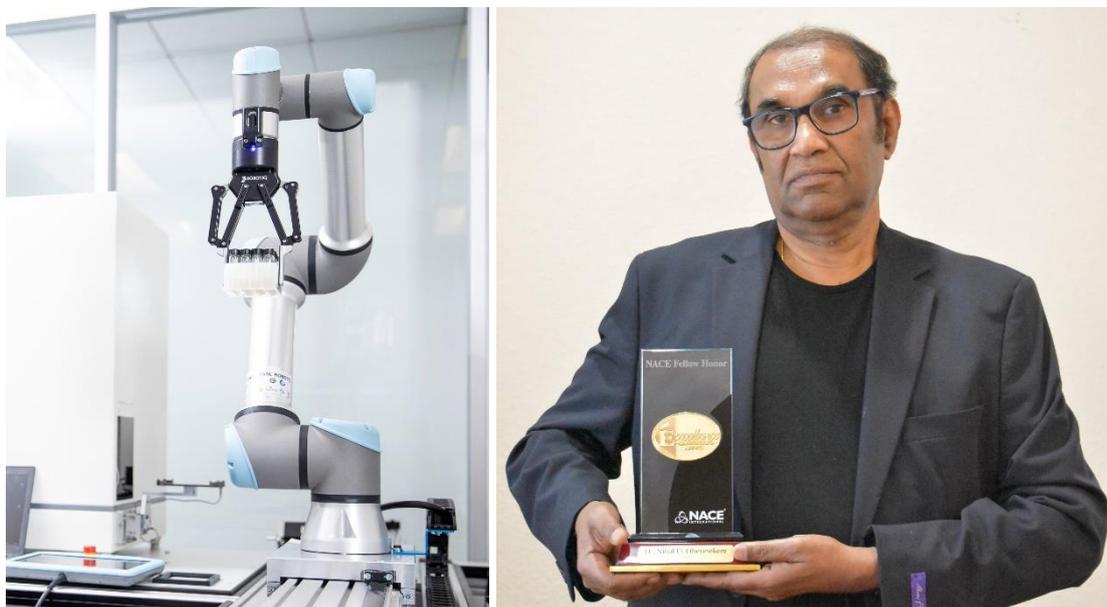
**What shifts have you seen in the field during your career?**

Our customers – companies like Total, Shell, Exxon and BP – are very responsible and they are looking for greener solutions now more than ever. I think Clariant is really ahead of the competition in this area. I have to give a lot of credit to our company leadership because they are very dedicated and committed to making everything we do more sustainable. Sustainability really is our number one focus going forward.

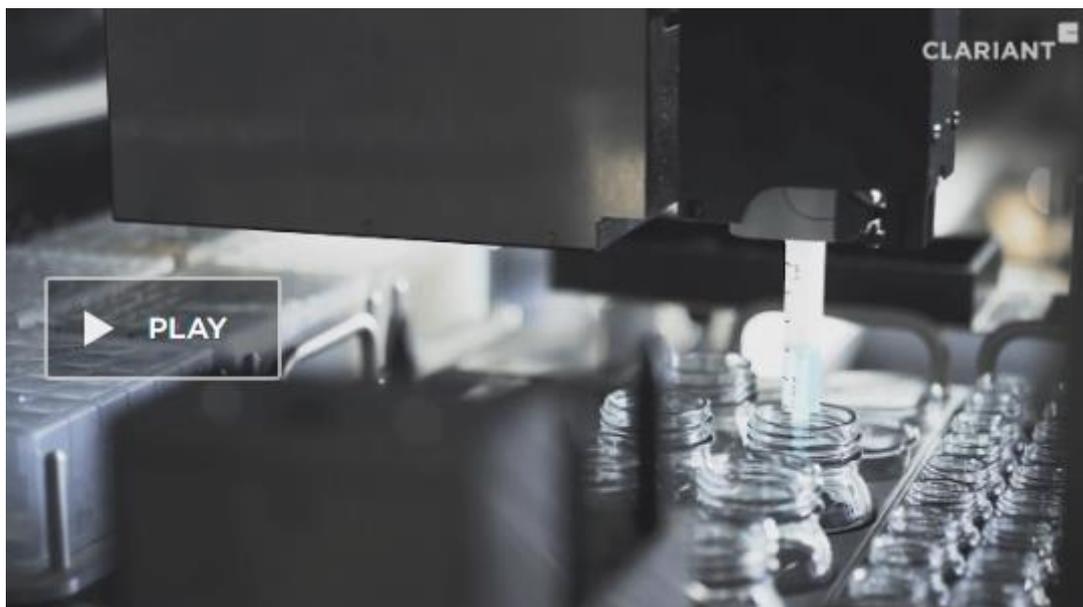
**What are Clariant's and your own goals moving forward?**

Before I finish my career, I would like to convert everything in Clariant's Oil and Mining Services corrosion product line to be environmentally benign. We're also decreasing our carbon footprint by making all of our chemicals highly concentrated to reduce solvent requirements, and we're developing chemicals that don't need as much heating to manufacture, which cuts electricity use. These are small changes, but when added together, they can have a high impact at the end. Basically, sustainability is at the core of most of the work that I do. If somebody asks me one day about what I contributed, I will say that I've strived to make the earth a little bit greener than I found it.

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### Notes to editors

Dr. Nihal Obeyesekere joined Clariant in 2011 and he currently serves as Head of Global Innovation Integrity Management for Business Unit Oil and Mining Services. Throughout his career, Nihal has dedicated himself to making the oil industry more environmentally responsible, a goal which has synergized with Clariant's focus on sustainability. In addition, Nihal has chaired many National Association of Corrosion Engineers (NACE) task groups and symposia, and he has been a regular lecturer at the annual corrosion school at NACE's New Orleans section for the last ten years. He has authored and co-authored more than 80 scientific publications, as well as being the finalist for the 2017 Lifetime Award from the World Oil Congress and winning the 2017 NACE Distinguished Service Award.

## GLOBAL TRADE MEDIA RELATIONS

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Clariant is a focused, sustainable and innovative specialty chemical company based in Muttenz, near Basel/Switzerland. On 31 December 2019, the company employed a total workforce of 17 223. In the financial year 2019, Clariant recorded sales of CHF 4.399 billion for its continuing businesses. The company reports in three business areas: Care Chemicals, Catalysis and Natural Resources. Clariant's corporate strategy is based on five pillars: focus on innovation and R&D, add value with sustainability, reposition portfolio, intensify growth, and increase profitability.

[www.clariant.com/oil](http://www.clariant.com/oil)

Clariant Oil Services is the fastest growing supplier of specialty oilfield production chemicals and services to the oil and gas industry. Our product offerings has an impressive reach extending from Enhanced Oil Recovery, Offshore and Deep Water, Conventional and Unconventional Oil & Gas, Heavy Oil, Pipeline Cleaning, Well Services Additives to VERITRAX™, our Intelligent Chemical Management System. Our global presence provides a unique position from which to address and resolve customer challenges anywhere in the world. We use chemistry, systems and experts to understand our customers' needs, then create high-value, innovative solutions that help our customers win. We strive to develop and deliver the most economical solutions with an unwavering commitment to high standards for health, safety and the environment and work to implement your custom chemical program with the utmost respect to the workforce and community.

Blog interview can be downloaded from [www.clariant.com](http://www.clariant.com) or [www.PressReleaseFinder.com](http://www.PressReleaseFinder.com).