Why Pure has become the go-to solution for one of Korea's most influential researchers



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Prof. Yong Sik Ok
Professor and Global Research Director at Korea University,
Korea

"I don't spend any budget or time managing my personal website anymore - my Pure profile explains everything about me. Most importantly, this wonderful software enables me to build and maintain the international network that has increased the reach, volume and impact of my publications."

At Korea University, Prof. Yong Sik Ok is working at the vanguard of global efforts to develop sustainable waste management strategies and technologies. Together with his team, he is addressing the rising crises in electronic and plastic waste, and the pollution of soil and air with particulate matter.

To date, his wide-ranging achievements have delivered lasting impact and won him global renown. For example, in 2019, he was the first Korean to be named a Clarivate Analytics Highly Cited Researcher (HCR) in the field of Environment and Ecology, while, in 2021, he became the first Korean to be recognized as an HCR in two separate fields (Engineering, and Environment and Ecology). In 2019, analysis by the Chinese Academy of Sciences saw him named the top Environmental Science researcher in the world. He is also one of his university's leading contributors to the United Nations Sustainable Development Goals (UN SDGs).

For Prof. Ok, this impact has only been possible thanks to his broad and international network, spanning almost 50 countries and nearly 400 universities, institutes and industries.

In this case study, Prof. Ok explains how <u>Pure</u> has helped him develop and maintain that global network. He also highlights how Pure supports many other aspects of his work as a researcher and Professor. And he reveals how he leverages Pure data to help shape university strategy in his role as Korea University's Global Research Director.

Use case #1: Build your collaboration network

As of January 2022, almost 95 percent of Prof. Ok's 740+ publications involved international collaboration. And almost 90 percent were in the top 10 percent of articles in their field. He says: "These figures make it clear that articles based on international collaboration with renowned universities in other countries usually have higher impact, particularly in the field of Environmental Sciences."





For Prof. Ok, international collaboration is essential given the global significance of his research interests. He explains: "While I'm pretty good at looking at plastic pollution in soil, there are other researchers at Stanford University in the US who look at the same issue in water, while others in Europe focus on sediment. It's like a puzzle — if we combine our expert areas, eventually we make a bigger picture and achieve broader reach and impact."

And Pure has played a vital role in helping him locate those collaborators.

- Finding research partners at Korea University: Prof. Ok uses the "fingerprint" section in his <u>Pure profile</u>, which draws on smart technology to identify the topics in which he is most active. He explains: "When I click on a topic label, I can view the profiles of other researchers at my university in that field."
- Identifying potential international collaborators: He visits the Pure sites of universities he's interested in working with and uses the same fingerprint technology to review the profiles of researchers and research units. According to Prof. Ok: "This system has helped me build strong collaborations with coauthors and principal investigators worldwide."

In fact, when Prof. Ok moved to Korea University (KU) around five years ago, Pure proved invaluable in helping him identify key stakeholders among the university's 5,000 faculty. "Using the fingerprint option, I was able to figure out which departments/ faculties had mutual interests. I then invited them to a weekly group meeting, where we discussed common ground, and established new projects."

Importantly, Pure also helps Prof. Ok identify where there are gaps in his existing collaboration network. "I can look at visualizations of my collaborations and filter by year. If my work has been cited, for example, 50,000 times, I want those citations to be evenly distributed over 100 countries. Along with my Pure collaboration map, the visualizations help me understand who I'm working with and where I need to diversify."

Prof. Ok also draws on Pure data to support collaborations in his role as Director of the Sustainable Waste Management Program for APRU (Association of Pacific Rim Universities), a network of



From Left: Prof. Jintaek Jung (President, Korea University), Prof. Hye-sook Lim (Minister of Science and Information and Communication Technologies), Prof. OK and Mr. Lee Bang-soo (President, LG Energy Solution)

61 leading universities, including KU. <u>APRU</u> works with thought leaders and policy makers to seek solutions to our 21st century challenges.

Stanford University's Professor William Mitch, who is co-Director of the Sustainable Waste Management Program, notes: "Prof. Ok has been a leader in raising the profile of environmental research beyond academia into the echelons of government and industry, and in generating transnational collaborations. He has been a particular leader in promoting collaborations among Pacific Rim universities. As the focus of the world economy increasingly shifts to the Pacific Rim, the types of collaborations he is building with the help of Pure will be key to addressing the resulting environmental challenges."

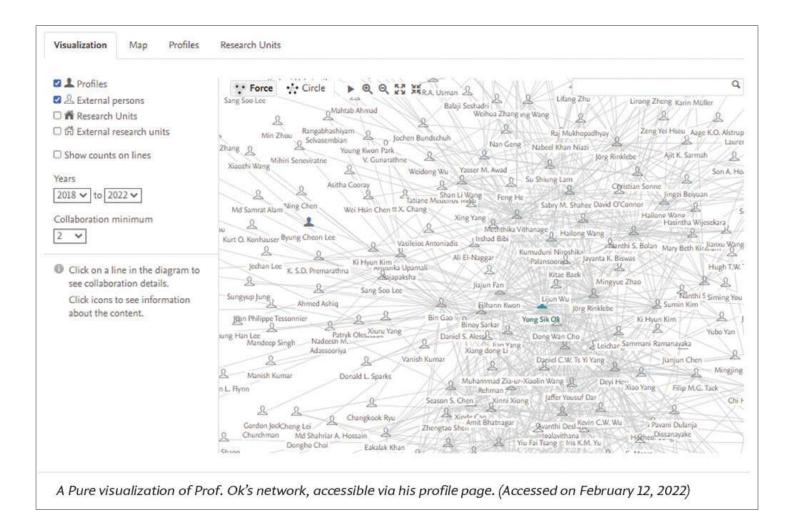
Raising international recognition and reputation with Pure: KU's story



Interested in finding out how institutions can leverage Pure to increase their global profile and networks? In our case study, "Building international collaboration and recognition with Pure", Korea University's Executive Vice President for Research, Prof. Kwan-Young Lee, shares the many benefits that KU has reaped since Pure's introduction.







"Pure isn't just a platform for research outputs, it also graphically elaborates on networks worldwide, activities per year, and many other useful data. That makes it suitable for managing and showcasing my research and my connections, and it helps other researchers find me and view my research in seconds - I use the network map and visualizations almost every day."

- Prof. Yong Sik Ok

Use case #2: Increase your visibility – and opportunities

According to Prof. Ok, his Pure profile often enhances his research work. "For example, when applying for grants, I have been able to use the data and visualizations in Pure to showcase my research and collaboration."

Importantly, he also believes Pure has increased the discoverability of his work, resulting in new partnerships,

avenues of research, funding opportunities and networks. A prime example is his growing interaction with Australia.

- When the Australian government established that Prof. Ok was
 the Korean scientist with the highest number of collaborations
 with their country, he was invited to present his work to VIPs at
 the Australian embassy. He says: "I showed them my network
 visualization in Pure and that I had a strong collaboration with
 the University of Queensland, one of their top universities."
- Prof. Ok then received an honorary professorship from University of Queensland (UQ), and his information – and a link to his Pure profile – were added to the UQ website.
- He was also listed on a website the Australian embassy in Korea launched to showcase international collaboration.
- Now universities in Australia frequently invite him to apply for funding together, as "having someone in the application with a strong collaboration record improves your chances of success."

Prof. Ok adds: "This was all possible, in part, due to Pure. Now I have my Pure profile, I don't spend any budget or time managing my personal website anymore. Without Pure, I would survive, but I would have to spend a lot of time building my network and it would suffer. Pure has become a key part of my scientific life."





"These days I receive many invitations from countries I regularly collaborate with and I always ask how they heard about me and my research. Typically, they mention either Pure or Scopus. That's why I link to my Pure profile on my website, in my email and everywhere. It is simply the best tool for improving my scientific career."

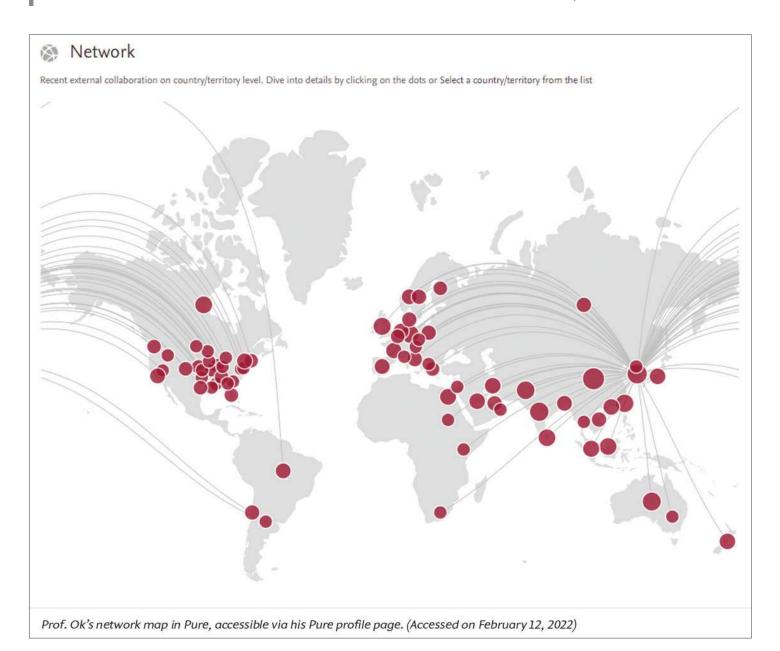
- Prof. Yong Sik Ok

For Prof. Ok, Pure not only increases his own visibility and connections, it also enables him to help others in his network raise theirs. He reveals: "In every presentation or student lecture, I include a slide showing my network map in Pure. I tell people that if they click on that map, they can see the name of every country and university I've collaborated with. If they want to build a relationship with Stanford University, or Harvard, I can arrange for them to meet my contacts there."

Prof. Ok also encourages new PhD students to use the map to identify short-term study opportunities, and advises them to consult Pure when searching for PhD topics and supervisors.

Use case #3: Track your research performance, including against the UN SDGs

With its strong focus on sustainability, Prof. Ok's research has close links to several of the 17 United Nations Sustainable







Development Goals. In fact, he has the largest number of SDG-linked publications at his university.

In 2021, Pure introduced banners showcasing the SDGs each institution is working on, along with badges on researcher profiles showing the SDGs they are associated with, and links to other researchers active in that SDG area.

Reflecting on the new features, Prof. Ok comments: "I can now see which people are working towards the same goals as me and review their profiles. They can also see me! This is proving extremely helpful, especially with collaborations, and I usually check for updates at least once a week."

He adds: "I recently chaired a *Nature* conference on sustainable waste management, which was attended by Lim Hye-sook, Korea's Minister of Science and ICT, and Lee Bang-soo, the CEO of LG Inc. The UN SDGs were widely discussed, and I was able to use Pure to explain our university's contribution to them. In fact, nowadays, whenever I talk about the SDGs, I use Pure – it's so helpful."

"The kind of research analysis that Pure provides is unique – it's really not comparable to any other software."

- Prof. Yong Sik Ok

For Prof. Ok, another big draw is the range of research metrics available in Pure. "Other databases and Google don't provide a comprehensive data set of indicators, but Pure keeps me up to date on how my research is being viewed and used; for example, appearances in the media, or mentions on social media. I can always see up-to-date data on who is reading my paper and



where. And instead of waiting one year for citation data, I have access to real-time information on my impact."

Use case #4: Showcase and benchmark your achievements

When Prof. Ok joined KU, one of his first actions was to ask the university's Pure administrators for access to the system. He explains: "We didn't have Pure at my previous university, but I had heard about it and could see the value of it. I think I was one of the first faculty at KU to ask for my own Pure user ID and password."

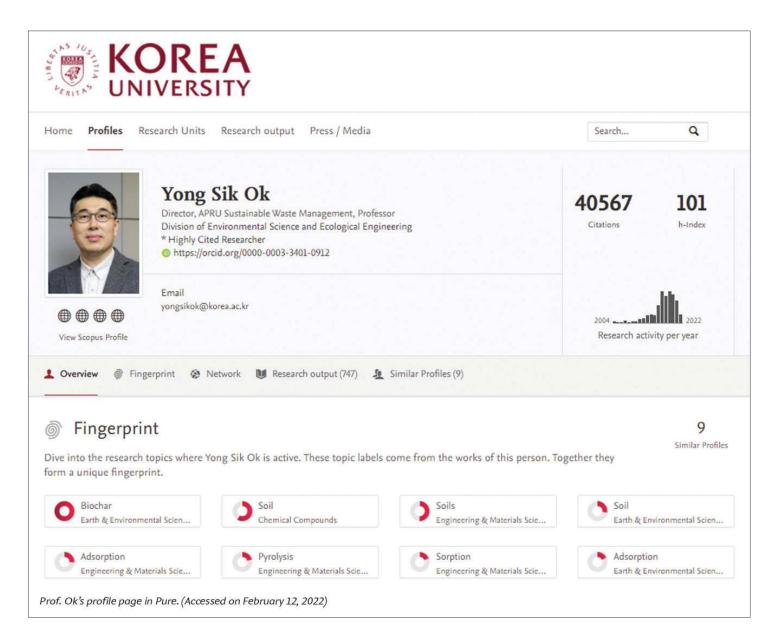
Once access was granted, Prof. Ok began adding additional information to his profile, including updates on his lab and links to relevant websites, along with his Scopus profile and ORCID ID.

He also added links to his Pure profile to his emails and other









communications. "I point people towards Pure because my profile is freely available for everyone to access, and that's important – certain countries, such as China, can't access Google Scholar and, with other software, people often have to have a license themselves before they can view your information."

Prof. Ok adds: "Pure researcher profiles also contain more information than any other software's and are constantly updated. That gives me a lot of motivation, but it also motivates my students and group members, as well as my international collaborators."

He laughs: "Every day my collaborators, all Highly Cited Researchers, and I check our Pure profiles to see who has the highest citation numbers and h-index — it's become a fun competition. And we can do that because Pure makes achievements very visible."

Prof. Ok and his colleagues at KU also make use of Pure's option to directly compare performance based on research unit. He

says: "We are very competitive. If we are not the top, it gives us motivation, and, if we are the top, we know we need to invest more effort to maintain our performance. Either way, it's good for the university."

Use case #5: Drive university research strategy

In his role as Korea University's Global Research Director, Prof. Ok has been exploring how Pure data can support strategy development.

For example, he believes the SDG features in Pure can be used to reshape research units at KU. He explains: "At our university, we have a few Environmental Science departments, but the faculty members are quite diverse. If we really want to focus on Environmental Sciences, we can use the Pure UN SDG information to identify leading scientists in the field, and then group them together in a virtual unit." He adds: "The same Pure features could be used to guide the composition of







Screenshot of Prof. Yong Sik Ok on the Korean television program, Bravo K-Scientist at YTN science, with his Pure network map visible on the monitor beside him.

"I was recently interviewed for a documentary on my scientific life on Korean television — a great honor. They asked what the secret is to becoming the number one environmental scientist in the world. I explained that Pure has made everything possible."

– Prof. Yong Sik Ok

undergraduate and graduate classes."

He also uses Pure to highlight to senior executives the SDGs in which KU's contribution should improve if they want to enhance their overall SDG performance. "The benefit is that Pure is really easy for the senior executives and faculty to understand. It's very user-friendly."

Prof. Ok also uses Pure to support strategy development in his own lab; for example, to determine travel plans. "If Pure shows me that I have very strong collaboration with Singapore in certain topics one year, then my colleagues and students will make a strategic decision to organize workshops there. Because people in Singapore recognize our research, the workshops have a much bigger impact." He adds: "In this way, we can use Pure to enhance our research outcomes and the reputation of our university."









About Professor Yong Sik Ok

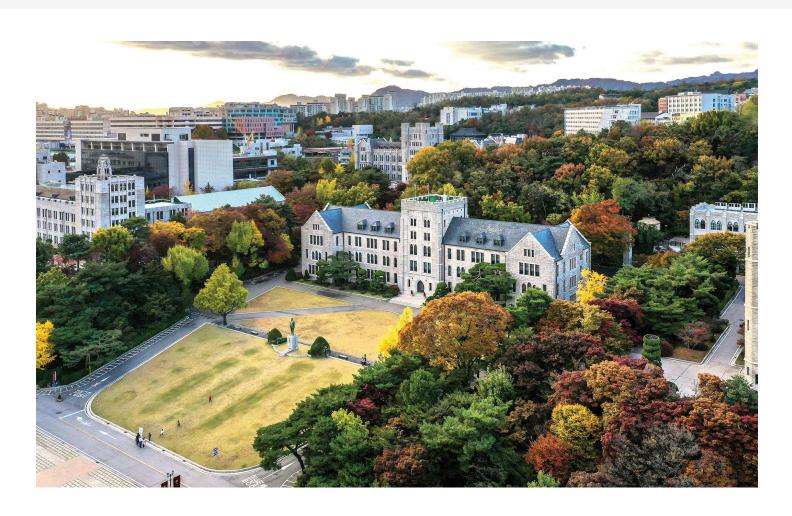
Prof. Ok has published more than 900 research papers and books, 92 of which have been ranked as Web of Science ESI top papers (Highly Cited Papers and Hot Papers). His global positions include honorary professor at the University of Queensland (Australia), visiting professor at Tsinghua University (China), adjunct professor at the University of Wuppertal (Germany), and guest professor at Ghent University (Belgium). He also serves as a Co-Editor-in-Chief of Critical Reviews in Environmental Science and Technology, an Editor of Environmental Pollution, and sits on the editorial boards and advisory boards of several leading journals, such as Environmental Science and Technology.

He currently serves as Director of the <u>Sustainable Waste</u> <u>Management Program</u> for APRU, the Association of Pacific Rim Universities, and as Co-President of the International ESG (Environmental, Social, and Governance) Association, together with Prof. Jay Hyuk Rhee at KU School of Business. He has also served on the Scientific Organizing Committee of P4G Nature Forum: Climate Change and Biodiversity, and the Nature Forum: Plastics and Sustainability.

About Korea University

Established in 1905, Korea University is one of the oldest institutions in the country. It is one of Korea's three prestigious "SKY" universities; the other two are Seoul National University and Yonsei University. Admission to these SKY universities is extremely competitive, with Korea University accepting fewer than 1% of early admissions. Attendance at one of the SKY universities is widely considered a determinant of Korean students' future career and social status. For the past five years, Korea University has been ranked as one of the top 100 universities in the world by the QS World University Rankings.

Korea University is comprised of two campuses - in Seoul and Sejong City - and three affiliated hospitals - Anam, Guro and Ansan. It is a large and respected research institution, notable in South Korean history for being the first educational institution to offer academic programs in Korea in various disciplines, such as law, economics and journalism. Today it has 59 academic departments and programs organized into 17 colleges and schools. There are currently more than 37,000 students enrolled and just over 5,000 faculty.







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