

Dr. Hannu L. Suominen’s research and product development projects, technology, material and product deliveries 1977-

<i>CLIENT/PARTNER</i>	<i>PLACE</i>	<i>COUNTRY</i>	<i>RESEARCH PROJECT (TP), TECHNOLOGY, MATERIAL OR PRODUCT DELIVERY (LT)</i>	<i>COMP/NDA</i>	<i>YEAR STARTED</i>
AGRICULTURE AND FOOD PRODUCTION:					
Finnish Co-operat. Dairies Assoc.	Helsinki	FI	Temperature gradient incubator/sour milk, LT	B/3	1986
University of Helsinki	Helsinki	FI	Temperature gradient incubator/basic research, LT	B/1	1986
Biocon Biochemicals Ltd	Cork	IR	Bacillus strain for Amylaze production, LT	B/3	1986
Neste Oyj	Porvoo	FI	Polyethylene produc. and degradation analysis, TP	B/2	1987
Amerplast Oy	Tampere	FI	Polyethylene degradation trials, LT	B/2	1987
T. K. Ruti	Porvoo	FI	Biofilm masterbatch production, TP, LT	B/2	1987
Rosenlew Oy/Teno AB	Norrköping	SE	Biofilm masterbatch production, TP, LT	B/2	1988
Rosenlew Oy	Pori, Merikarvia	FI	Biofilm production, TP/ LT	B/2	1988
Mäntyniemi Farm	Kesälahti	FI	Biofilm field trials in 7 farms,TP, LT	B/2	1989
Ministry of Agriculture	Peking	CN	Chemical free agricultural technology, TP, LT	B/3	1989
Agriculture Development Center	Peking	CN	Biofilm delivery and field trials, TP, LT	B/3	1989
College of Veterinary Medicine	Helsinki Univer.	FI	Temperature gradient deliveries/pathogens, 2 x LT	B/1	1989
Valio Oy, Finnish Co-operat. Dairies	Helsinki	FI	Temperature gradient incubator/milk, LT	B/3	1989
National Veterinary Institute	Helsinki	FI	Temperature gradient incubator/Listeria, LT	B/1	1989
Lindström pig farm	Sipoo	FI	Water purification of pig slurry, TP, LT	B/2	1989
Meat Technology Institute	Helsinki Univer.	FI	Temperature gradient incubator/meat, LT	B/1	1989
MP. Madam Deng Nang	Peking	CN	Biofilm cultivation in Finland and in PRC, TP	B/3	1990
National Public Health Institute	Kuopio	FI	Temperature gradient incubator/pathogens, LT	B/1	1990
Burns Philip Pty Ltd	North Ryde NSW	AU	Temperature gradient incubator/beer, yeast, LT	B/3	1990
Wipak Gryspeert S.A.S.	Bousbecque	FR	Biofilm production, TP, LT	B/2	1990
Japan Steel Works Ltd	Tokyo	JP	Biofilm production, TP, LT	B/2	1990
Technical University of Helsinki	Espoo	FI	Temperature gradient incubator/chemistry, LT	B/1	1990
Ilmajoen Osuusmeijeri YTJ	Ilmajoki	FI	From whey to cheese by electrochemistry, TP	B/2	1991
Valio Oy	Riihimäki	FI	Temperature gradient incubator/cheese, LT	B/2	1991
Univer. Degli Studi di Brescia	Brescia	IT	Temperature gradient incubator/ research, LT	B/1	1991
Kirvelä Stable	Mynämäki	FI	Bio-fertilizer from horse manure, LT	BB/1	1991
Riuttaskorpi Dairy Farm	Loimaa	FI	Bio-fertilizer from cow manure, LT	BB/1	1991
Lahti Farm	Kisko	FI	Fertilizer from active sludge, LT	BB/1	1991
Juva Dairy Farm	Uusikaupunki	FI	Bio-fertilizer from cow manure, LT	BB/1	1991
Aura Chemicals	NSW	AU	Fertilizer from slaughter waste, LT	BB/1	1991
Sulin Stable Farm	Kangasala	FI	Bio-fertilizer from horse manure, LT	BB/1	1991
Pirhonen Dairy Farm	Kitee	FI	Bio-fertilizer from cow manure, LT	BB/1	1991
Silpola Pig Farm	Lammi	FI	Bio-fertilizer from pig manure, LT	BB/1	1991
Toukovirta Dairy Farm	Hikiä	FI	Bio-fertilizer from cow manure, LT	BB/1	1991
Sanox AB	Umeå	SE	Experimental Quantor- reactor, LT	BB/1	1991
Agricultural school	Jämsä	FI	Bio-fertilizer from pig manure, LT	BB/1	1991
Lytbacka Dairy Farm	Kronoby	FI	Bio-fertilizer from cow manure, LT	BB/1	1991
Unilever Research	Bedford	UK	Temperature gradient incubator/ food research, LT	B/3	1992
State Research Center	Espoo	FI	Temperature gradient incubator/ food research, LT	B/1	1992
Vasala Stable Farm	Oulu	FI	Bio-fertilizer from horse manure, LT	BB/1	1992
Ketonen Stable Farm	Läyliäinen	FI	Bio-fertilizer from horse manure, LT	BB/1	1992
VTT Laboratory	Jyväskylä	FI	Elimination of contaminated soil, LT	BB/1	1992
Kuusikko Stable	Kuusjärvi	FI	Bio-fertilizer from horse manure, LT	BB/1	1992
Rasila Chicken Farm	Somero	FI	Bio-fertilizer from chicken manure, LT	BB/1	1992
Björkö Fisk	Åland	FI	Bio-fertilizer from fish waste, LT	BB/1	1992
University of Eastern Finland	Liperi	FI	Bio-oxidizer for animal husbandry research, TP, LT	B/1	1993
Board of Environment and Waters	Helsinki	FI	Temperature gradient incubator/ water research, LT	B/1	1993
University of Eastern Finland	Joensuu	FI	Temperature gradient incubator/research, LT	B/1	1993
B. Damkjaer	Copenhagen	DK	Purification trials of pig slurry, TP	B/2	1993
Nabuurs Farm	Braband	NL	Water Purifier for Dairy and Pig Farm, LT	A+C+D/2	1997
Pirteä Porsas Oy	Vehmaa	FI	Purification of pig slurry, TP	D/2	2002
Bundesforsch. für Ernährung	Karlsruhe	DE	Temperature gradient incubator/ food research, LT	D/2	2003
Biovakka Oy	Vehmaa	FI	Purification of cow manure, TP	D/2	2003
Saaristomeren kala Oy	Uusikaupunki	FI	Elimination of viruses from fishery, TP	D/2	2003
Arla Foods AB	Stockholm	SE	Purification of wastewater from Dairy Plant, TP	D/2	2004
J.R. Simplot Company	Boise, ID	USA	Fertilizer from cattle manure by bio-oxidizer, TP	H/2	2004
Al Rawabi Dairy CO.	Dubai	UAE	Pure water and fertilizer from Dairy Farm, TP, LT	D/3	2004
Dubay Ingredients LLC	Stratford, WI	USA	Purification of wastewater from Cheese Plant, TP, LT	H/3	2005

Dubay Ingredients LLC	Stratford, WI	USA	Purification of wastewater from Ethanol Plant, TP, LT	H/3	2005
Jepuan peruna Oy	Jepua	FI	Purification of potato process water, TP, LT	D/2	2005
United Dairymen of Arizona	Tempe, AZ	USA	Purification of wastewater from Dairy Plant, TP	D/2	2005
Smithfield Beef Group Inc.	Green Bay, WI	USA	Purification of slaughterhouse wastewater, TP	H/3	2005
Foremost Dairy Inc.	Sparta, WI	USA	Purification of wastewater from cheese process , TP	H/3	2005
ConAgra Foods Inc.	Omaha, NE	USA	Wastewater of Hermisto Potato Plant , TP	H/3	2005
ConAgra Foods Inc.	Park Rapids,MN	USA	Wastewater of tomato plant, TP	H/3	2005
Emerald Dairy Inc.	Emerald, WI	USA	Purification of wastewater from Dairy Process, TP	H/2	2005
Golden Cheese Company	Corona, CA	USA	Purific. of wastewater of ethanol production, TP	H/2	2005
Kraft Inc.	Melros, MN	USA	Purific. of wastewater of ethanol production, TP	H/2	2005
Wholesome Dairy Farm	Chilton, WI	USA	Purification of biogas sludge of dairy farm, TP	H/2	2005
Sebesta Blomberg @ Associates	Roseville, MN	USA	Treatment of biosolids, TP	H/2	2005
Alfalfa America Inc.	Belle Plaine, MN	USA	Purification of alfalfa process water, TP	H/2	2006
Rahulan Rehu OY	Mikkeli	FI	Elimination of smell from of pet food factory, TP, LT	H/2	2006
Laukkala Farm	Kiuruvesi	FI	Pure water and fertilizer from cow manure, TP, LT	I/2	2006
Valio Oy	Lapinlahti	FI	Purification of cheese process waste water, TP	D/2	2006
Al Rawabi Dairy CO.	Dubai	UAE	Pure water and fertilizer from Dairy Farm, TP, LT	D/3	2006
Tabree Denmark ApS	Daugård	DK	Purification of pig slurry, TP	D/2	2008
DuPont	Paris	FR	Purification of water from soy process, TP	D/3	2012
NOAH Water Solutions BV	Asper	BE	Water Purifier for pilot research, TP, LT	D/2	2013
Open Country Dairy Ltd	Waharoa	NZ	Purification of dairy waste water, TP	D/3	2014
Food & Energy Campus GmbH	Frankfurt	DE	Purification of biogas slurry, TP	D/3	2014
Wedex Finland Oy	Tornio	FI	Pure Water and Natural Fertilizer from cow manure	J/3	2017
Al Rawabi Dairy CO.	Dubai	UAE	Pure water and fertilizer from Dairy Farm, TP, LT	J/3	2018

MUNICIPALITIES:

Prokisto OY	Kankaanpää	FI	Bio-oxidizer for wastewater treatment plant, LT	A+D/2	1993
Metropolitan Council, YTV	Helsinki	FI	Oxidization of organic household waste, TP, LT	D/1	1994
Karmöy county	Karmöy	NO	Purification of leachate from landfill, TP	D/1	1996
Metropolitan Council, YTV	Espoo	FI	Purification of leachate from Ämmässuo landfill, TP	D/1	1998
Secure Recycler LLC	San Francisc, CA	USA	Pyrolysis of used tires, TP, LT	F+G/2	1999
Lofoten Avfallssselkap AS	Lekenes	NO	Bio-oxidizer for household waste, septic sludge, LT	D/1	1999
Lofoten Avfallssselkap AS	Lekenes	NO	Air purifiers for bio-oxidizers, LT	D/1	2000
City of Espoo	Espoo	FI	Elimination of Ämmässuo Landfill, TP	D/1	2000
WWTP of Suomenoja	Espoo	FI	Purification of wastewater, TP	D/1	2002
Kuusakoski Oy	Heinola	FI	Purification of leachate from industrial landfill, TP,LT	D/3	2002
Ministry of Environment	Borj Chekir	TU	Elimination of organic waste from landfill, TP	D/1	2003
Vision 2015 Gambia	Jufureh	GM	Clean water from the Gambia River, TP, LT	D/1	2005
City of Heinola	Heinola	FI	Purification of wastewater, TP	D/1	2005
Hyvinkään Vesi Oy	Hyvinkää	FI	Elimination of wastewater sludge, TP	D/1	2005
Kotkan Vesi Oy	Kotka	FI	Purification of wastewater, TP	D/1	2005
Oy Silja Line AB	Helsinki	FI	Purification of wastewater from Silja Serenade, TP	D/2	2005
Vihti County	Vihti	FI	Purification of wastewater, TP, LT	D/1	2006
Maple Lake development	Maple Lake, MN	USA	Purification of wastewater, TP	H/2	2006
Annadale development	Annadale, MN	USA	Purification of wastewater, TP	H/2	2006
City of Lohja	Lohja	FI	Purification of leachate from landfill, TP	D/1	2006
USPure, LLC	Sausalito, CA	USA	Purification of wastewater, TP	H/2	2006
Europol SA	Athens	GR	Oxidation of municipal sludge, TP	D/2	2006
City of Francis	Francis, UT	USA	Purification of wastewater, TP, LT	D/2	2009
ASER AS	Skibotten	NO	Purification of leachate from landfill, LT	D/1	2009
City of Kuusamo	Kuusamo	FI	Purification of wastewater, TP	D/1	2010
Sato Energy Holdings (Pty) Ltd	Cape Town	RSA	Purification of wastewater, TP	D/2	2013
Timpanogos Special Services	Americ. Fork, UT	USA	Purification of wastewater, TP, LT	D/2	2014
The City of Inkom	Inkom, ID	USA	Purification of wastewater, TP	D/2	2014
City of Logan	Logan, UT	USA	Purification of wastewater, TP	D/2	2014
Jiangsu Yiyang Water Ind. Co.	Xixing	CN	Purification of wastewater, TP, LT	D/2	2015
SPARCL Ltd.	Feilding	NZ	Purification of wastewater, TP, LT	C/2	2015
Horowhenua District Council	Foxton	NZ	Purification of leachate from landfill, TP	C/2	2015
H.G. Leach & Co	Paeroa	NZ	Purification of leachate from landfill, TP	C/2	2015
H.G. Leach & Co	Tirohia	NZ	Purification of leachate from landfill, TP	C/2	2015
Bonny Glenn	Marton	NZ	Purification of leachate from landfill, TP	C/2	2015
Hamton Downs	Hamilton	NZ	Purification of leachate from landfill, TP	C/2	2015
IMOG	Harelbeke	BE	Purification of leachate from landfill, TP	C/2	2015
Makel Electro Mechanic Eng.	Ankara	TR	Drinking water from river, TP	C/2	2016
Palmerston North	Horizon region	NZ	Purification of wastewater, TP	J/3	2018

FOREST INDUSTRY:

Enso Gutzeit Oyj	Lappeenranta	FI	Prevention of slime in Paper Mill, TP, LT	B/2	1989
United Paper Mills	Valkeakoski	FI	Prevention of slime in Paper Mill, TP	B/3	1990
United Paper Mills	Valkeakoski	FI	Prevent. of degradat. of sack and cable paper, TP, LT	B/3	1990
Oy Metsä Botnia AB	Joutseno	FI	Prevention of slime in Paper Mill, TP	D/3	2005
Myllykoski Oyj	Myllykoski	FI	Purification of wastewater of paper process, TP	D/2	2005
Stora Enso, Packaging Boards	Imatra	FI	Purification of wastewater of paper process, TP	D/2	2005
Mreal Oyj	Kirkniemi	FI	Purification of wastewater of paper process, TP, LT	D/2	2005
Mreal Oyj	Joutseno	FI/USA	Purification of BCTMP wastewater, TP, LT	H/3	2007
Sonoco Alcore Oy	Karhula	FI	Purification of board process water, TP	D/2	2009
Andritz Oy	Kotka	AU	Purification of pulp process water, TP	D/2	2011
Zubialde Paper Mill	Aizarnazabal	ES	Purification of TMP process water, TP	D/2	2012
South African Pulp and Paper	Lohja	FI	Purification of pulp process water, TP	D/3	2012
South African Pulp and Paper	Lohja	FI	Purification of pulp process water, TP	D/3	2012
Asian Pulp and Paper, Co.	Suzhou	CN	Purification of paper process water, TP	D/2	2012
UPM Oyj	Fray Bentos	UY	Purification of eucapulp process water, TP	D/3	2013
UPM Oyj	Kaukas	FI	Purification of bleaching process water, TP	D/3	2013
UPM Oyj	Jämsänkoski	FI	Purification of TMP process water, TP	D/3	2013
Stora Enso, Fluiting Mill	Heinola	FI	Purification of fluting process water, TP	D/3	2013
Corenso United Oy Ltd	Pori	FI	Purification of board process water, TP	D/2	2013
Vida Paper	Lessebo	SE	Purification of paper process water, TP	D/2	2013
Metsäboard Oyj	Espoo	FI	Purification of board process water, TP	D/2	2013
P&P Project GmBh	Winterthur	CH	Purification of paper process water, TP	D/2	2013
APP Gold Huasheng Paper Co.	Suzhou	CN	Purification of paper process water, TP	D/3	2013
Egypt Uniboard	Cairo	EG	Purification of paper process water, TP	D/2	2013
Jiangsu Yiyang Water Ind. Co.	Xixing	CN	Purification of paper/pulp process water, TP, LT	D/3	2015

MINING INDUSTRY:

Titania AS	Hauge i Dalene	NO	Jet Mill to Ilmenite Mine, LT	E+D/2	1998
Riddarhyttan Resources AB	Kittilä	FI	Cyanide destruction in gold mine, TP	D/2	2003
Phelps Dodge Inc.	Phoenix, AZ	USA	Purification of Sierrita Mine waters, TP, LT	H/2	2007
Phelps Dodge Inc.	Phoenix, AZ	USA	Purification of Bisbee Mine waters, TP, LT	H/2	2007
Outotec Oyj	Espoo	FI	Purification of Mine waters, TP, LT	D/2	2009
Dragon Mining Sweden AB	Svartliden	SE	Purification of Gold Mine waters, TP	D/2	2011
Talvivaara Oyj	Sotkamo	FI	Purification of Nickel Mine waters, TP, LT	D/1	2012
Eesti Energia AS	Tallinna	EE	Purification of Shale Oil Mine waters, TP, LT	D/2	2012
Agnico Eagle Finland Oy	Kittilä	FI	Purification of Gold Mine waters, TP, LT	D/3	2013
Agnico Eagle Finland Oy	Kittilä	FI	Purification of Gold Mine sulfate waters, TP, LT	D/3	2014
LKAB/Wedex	Kiruna	SE	RFP for removal of uranium, TP	W/3	2019
LKAB/Wedex/Vattenfall	Kiruna	SE	Separation of uranium from mine water, TP, LT	W/3	2020
LKAB/Wedex	Kiruna	SE	Proposal for removal of uranium, TP, LT	W/3	2021
Fortum Water Solutions/Wedex/API	Hitura Mine	FI	Purification of jarosite water from cobalt mine, TP, LT	W+K/3	2022

GAS-, OIL- AND COAL PRODUCTION:

Norsk Hydro ASA	Oslo	NO	Purification of oil production water, TP	D/3	1999
Statoil ASA	Bergen	NO	Purification of oil production water, TP, LT	D/3	1999
Aramco	Riad	KSA	Purification of oil production water, TP	D/3	2004
British Petroleum America Inc.	Warrenville, IL	USA	Purification of oil production water, TP	D/3	2006
Vest Tank AS	Slovåg	NO	Purification of oil production water, TP	D/3	2006
USDOE/Wall Creek	Casper,WY	USA	Purification of oil field production water, TP	H/2	2006
RMOTC	MO	USA	Purification of oil field production water, TP	H/2	2006
Anadarko Petroleum Corporation	Houston, TX	USA	Purification of oil field production water, TP	H/2	2006
Encana Oil & Gas, Inc.	Mesa Verde, AZ	USA	Purification of gas production water, TP	H/2	2007
Encana Oil & Gas, Inc.	Edmonton	CA	Purification of oil-sand production water, TP	H/2	2007
Occidental Petroleum Corporation	NM	USA	Purification of gas and oil production water, TP, LT	H/3	2008
BCDE Group LLC	Minneapolis, MN	USA	Sale of US patent for water purification, TP, LT	D/2	2008
Eesti Energia AS	Tallinn	EE	Purification of phenol water from shale oil, TP, LT	D/2	2013
Aquatera	Grande Prairie	CA	Purification of oil-sand production water, TP, LT	D/2	2013
Jiangsu Yiyang Water Ind. Co.	Xixing	CN	Purification of coal gasification wastewater, LT	D/3	2014
Peace Field Limited	Hong Kong	CN	Purification of oil production water, LT	D/3	2014
Enpro Oil	Midvale, UT	USA	Purification of oil production water, TP	D/3	2015
Baotou City	Inner Mongolia	CN	Purification of coal mine production water, TP	C/3	2015
Alma Plus S LLP	Almaty	KZ	Purification of oil production water, TP	C/3	2016

POWER PLANTS:

Arizona Public Service Co.	Wintersburg, AZ	USA	Purification of water from Nuclear Power Plant, TP	H/2	2005
E.ON Finland Oyj	Espoo	FI	Purification of water from Coal Power Plant, TP	D/2	2006
Vantaan Energia Oy	Vantaa	FI	Purific. flugas condens. of waste power plant, TP, LT	D/2	2014

CHEMICAL and PHARMACEUTICAL INDUSTRY:

Fermion Oy	Hanko	FI	Penicillin- and glucose analyzers, TP, LT	J/3	1977
Bactomatic Inc.	Princeton, NJ	USA	Manufacturing of Microbe analyzer, TP	J/3	1980
Orion Diagnostica Oy	Espoo	FI	Electrochemical changes in culture media, TP	J/3	1981

Mother Load Plastics Inc.	Sonora, CA	USA	Manufacturing of Microbe Analyzer, TP	J/3	1982
Finnish Sugar Oyj	Hanko	FI	Optimization of production of starch enzymes, TP	J/3	1983
Nabisco Brands Inc.	CT	USA	Transfer of enzyme production to Finland, TP, LT	J/3	1984
Viiskulman Hammashoitola Oy	Kuopio	FI	Portable Microbe Enrichment Unit of Finnoflag, LT	D/3	2005
Jiangsu Yiyang Water Ind. Co.	Xixing	CN	Purification of water of Chemical Factory, TP, LT	D/3	2014
DuPont	Pass Christian	USA	Purification of wastewater from Delisle Plant, TP	D/3	2015

COMPANIES:

The Companies established by Dr. Hannu L. Suominen by which the above mentioned projects were delivered:

A: BCDE Invest Oy,	FI, 1971 - 2008,	Majority owner,	CEO 1985 - 2008
B: Biodata Oy,	FI, 1979 -1994,	Majority owner,	CEO 1979 - 1993
BB: Bioteräs Oy,	FI, 1985 – 1992,	Partner owner,	CEO 1991 – 1992
C: HLS-Elektroautomaatiikka Oy,	FI, 1993 - present,	Majority owner,	CEO present
D: BCDE Group Waste Management Ltd Oy,	FI, 1994 - 2015,	Majority owner,	CEO 1994 - 2015
E: Micropulva Oy,	FI, 1996 - present,	Majority owner,	CEO 1996 - 1997
F: BCDE GROUP Colorado LLC,	USA, 1999 - 2008,	Majority owner,	CEO 1999 - 2008
G: Universal Environmental Technologies Inc.,	USA, 1999 - 2008,	Majority owner,	CEO 1999 - 2008
H: BCDE GROUP LLC,	USA, 2003 - present,	Majority owner,	CEO 2003 - 2010
I: Geniva Oy,	FI, 2006 - present,	Majority owner,	CEO present
J: Personal contribution,	Biotechnology specialist		1977 – 2022
K: Applied Physics Instruments API Oy	FI, 2014 - present,	Licensor,	Partner 2019- present
W: Wedex Finland Oy,	FI, 2017 - 2022,	Licensee	Partner 2017- 2022

NDA: The availability of the results from the above mentioned projects:

- 1: Public results, no NDA
- 2: Results available under NDA
- 3: Results currently client classified confidential

SUMMARY:

The most important research projects, requests for proposals and deliveries, have been involved with purification of wastewater and drinking water. In the case of wastewater purification in the agriculture and forest industries, the impurities that are separated from manure and process waters can be converted to fertilizer, returned into the products or converted to energy.

For almost all other applications, additional treatment methods had to be developed to eliminate the harmful or even toxic impurities that were separated during the purification process, such as heavy metals, gasses, pharmaceuticals, hormones etc. to avoid air, water, and soil or food pollution.

This resulted in the development of the Zero Emission Technology and its related products that over time have provided us with an extensive databank of test results from a wide range of industrial applications.

A Finnish pioneer, the late Mr. Ville Kangas, established the company Bioteräs Oy in 1985 and started the production of bio-oxidizers for animal husbandry farms. He had experience in bio-gas production, and when it failed, he changed to bio-oxidation. When I joined his company as partner and CEO in 1991, I named the bio-oxidizer Quantor Compostor. The 35 Quantors had oxidized dry manure to bio-fertilizer from 1985 to 1990. From 1990 onwards larger farms and wet manure based practices forced us to develop the MUST water purifier for separation and purification of liquid fraction from wet manure as pure water. This led to the development of the Chemostor bio-oxidizers for production of high quality Bio-Fertilizers.

The results confirm that the current deteriorating environmental and living conditions can be reversed back to a healthy environment with clean air, water, soil and food, by using our suite of Zero Emission Technologies. From 48 original inventions, there are 153 issued Letter of Patents in my name.

Many thanks to all our customers, representatives and distributors, with whom we have delivered over 300 projects to 45 countries. We will further develop and offer our profitable methods and products for the benefit of all.

Espoo, December, 2022

Dr. Hannu L. Suominen, PhD in Marine Microbiology, interested in High Energy Physics and Electronics

Chairman of the HLS-Electro Group of New Companies, dedicated to produce Fresh Water, Healthy Food and Zero Emission Energy.