



荷兰氢能产业联盟

HyNed

Dutch hydrogen network



2019年9月在第四届如皋国际氢能与燃料电池汽车 大会举行荷兰氢能产业联盟签约仪式

Signing partner agreement at Rugao International Hydrogen Fuel Cell congress, Sept 2019





2020年1月在荷兰海尔德兰省政府举行荷兰氢能产业联盟 签约仪式及政
府交流会谈

**Signing PIB covenant at provinciehuis Gelderland, on the 29th Jan,
2020**



Start van business cluster HyNed

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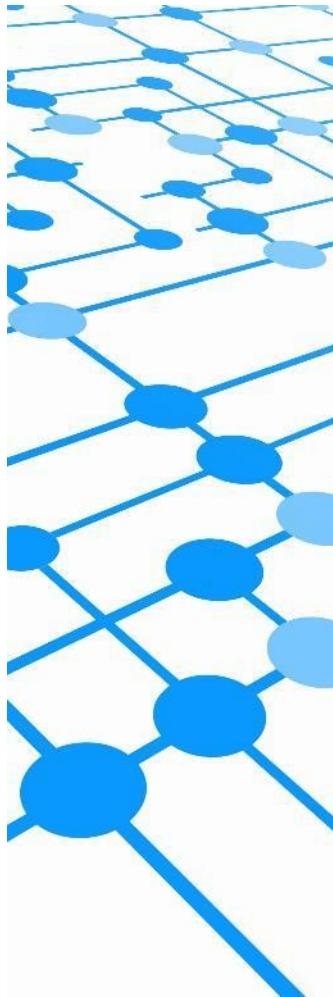
Het waterstof business cluster HyNed, onder aanvoering van Kiemt partner Hymove, ondertekende een convenant met de rijksoverheid om ten minste 3 jaar samen op te trekken bij samenwerking met Chinese partijen op het gebied van waterstof. Gelderse commissaris John Berends en mr Zhang Guosheng, economic counselor van de ambassade van China, waren bij de aftrap aanwezig. Andere deelnemers zijn Nedstack, HAN, KIWA en Hyet. Gelderland en Oostnl ondersteunen het cluster bij verdere ontwikkeling. Het cluster ontstond tijdens de Chinese handelsmissie in september vorig jaar. De PIB regeling van het rijk vormde de basis voor de samenwerking en bijhorend [convenant](#).

Ondanks de corona problemen in eigen land en het feit dat deze week het Chinese nieuwjaar wordt gevierd, nam de counselor na het officiële gedeelte ruim de tijd om over verdere samenwerking te praten. Zo zal de vierde editie van het Sino-Dutch Trade and Investment Forum in de loop van het jaar in Gelderland plaats vinden en is een volgende handelsmissie in

[voorbereiding](#)

荷兰氢能产业联盟介绍

HyNed – Dutch hydrogen network introduction



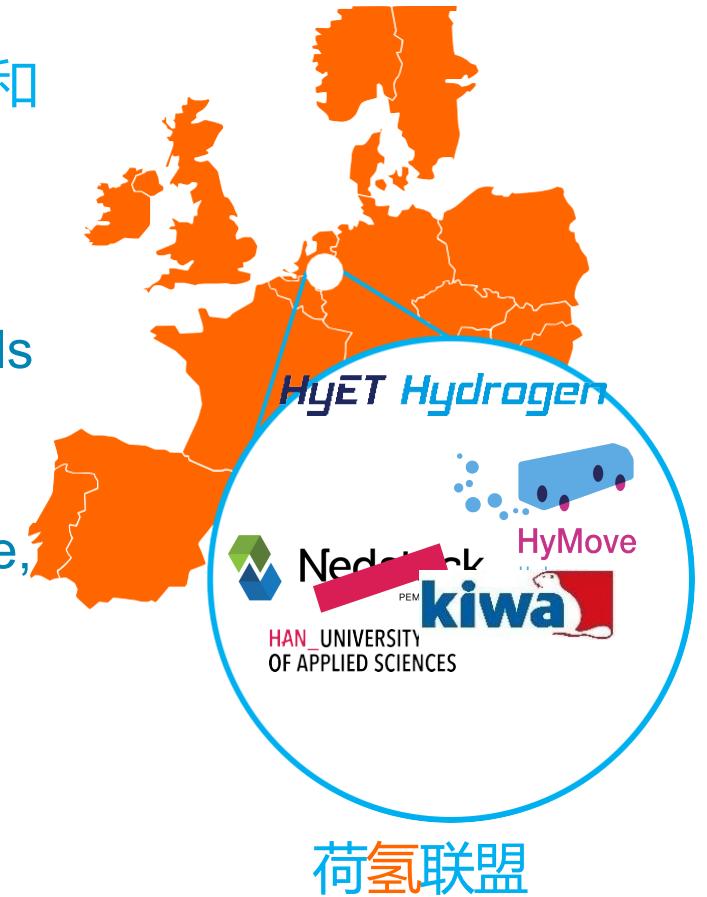
- 由荷兰国家企业局支持发起的荷兰首家氢能产业合作平台 HyNed is **sponsored by Dutch national government** and is the **very 1st collaboration network** by a **hydrogen cluster** in the Netherlands
- 整合了东荷兰地区特有的氢能应用技术资源和完整 供应链体系 Based on the **unique technical advantages** from the hydrogen industry in the East of Netherlands and representing the **full supply chain**
- 集中氢气生产/分配、压缩、燃料电池堆、燃料电池系统开发/集成、燃料电池创新、氢气法规/认证 的整体供应链资源 HyNed partners cover the **main sectors** in the hydrogen supply chain; from production, compression, fuel cell stacks and fuel cell system, R&D and test/certification
- 欧洲5大氢能演领先技术合作伙伴； 氢能源产业生态系统的佼佼者 HyNed partners are **5 leading technical companies**, representing the top hydrogen technologies in Europe

成立荷兰氢能产业联盟的意义和优势

Purpose and advantage



- 作为荷兰氢能产业链与中国氢能相关企业，机构和政府部门的沟通渠道和联络窗口 Contact portal and promotion of the Dutch hydrogen cluster
- 联盟企业地理位置集中在东荷兰海尔德兰省的氢能源基地 Based on the rich resource of hydrogen application R&D from the East of Netherlands
- 整合产氢，基础设施，燃料电池应用集成，设备检测的整体供应链平台 Joint force of full supply chain knowhow; from production, infrastructure, power generation, application, control and safety
- 紧邻德国边境的化工产业园区 Unique geographical location and strong ties with German hydrogen industry
- 荷兰及整个欧洲氢能源领域的深厚背景 In-depth knowhow and network with EU hydrogen industry





Theo Hendriks

荷氢联盟主席

HyNed network chairman

荷兰HyMove，燃料电池系统集成公司创始人。荷兰及欧洲氢能源应用和燃料电池产业代表，发起人和推广者

固态物理学博士，声震和流体动力学专家；曾任欧洲宇航实验室负责人，参与研发协和式超音速飞机，阿丽亚娜4型火箭等科研项目；首批美国宇航局欧洲科学家。荷兰及欧洲气体工业代表人，氢能源应用产业链和燃料电池系统技术专家

CEO and founder of HyMove company.
HyMove is fuel cell power generator system producer from the Netherlands. First generation of hydrogen application promoter, initiator and representative. PhD of physics, expert on super sonic and fluid dynamics; responsible of ESA lab in the Netherlands, support development of Ariana IV and supersonic airplane Concorde; one of the first generation of scientist invited to work for NASA. Chairman of EU gas appliance standardization project.



潘恩Tina Pan

荷氢联盟总经理

HyNed network general manager

荷兰HyMove，燃料电池系统集成公司运营经理。荷氢产业联盟发起人，总经理，联络负责人。竭诚为中荷氢能源发展助力！

Operations manager of HyMove BV. Founder and general manager of HyNed.
Over 10 years of working experience in international business, logistics, supply chain management and customer relations. Has a strong focus on international business between Asia and Europe.



荷兰文化中的创新和可持续发展精神
Innovation and sustainability in the
Netherlands



完善供应链在氢能源产业发展中的必要性
Sense of urgency and
ambition of moving
forward with full
hydrogen supply chain

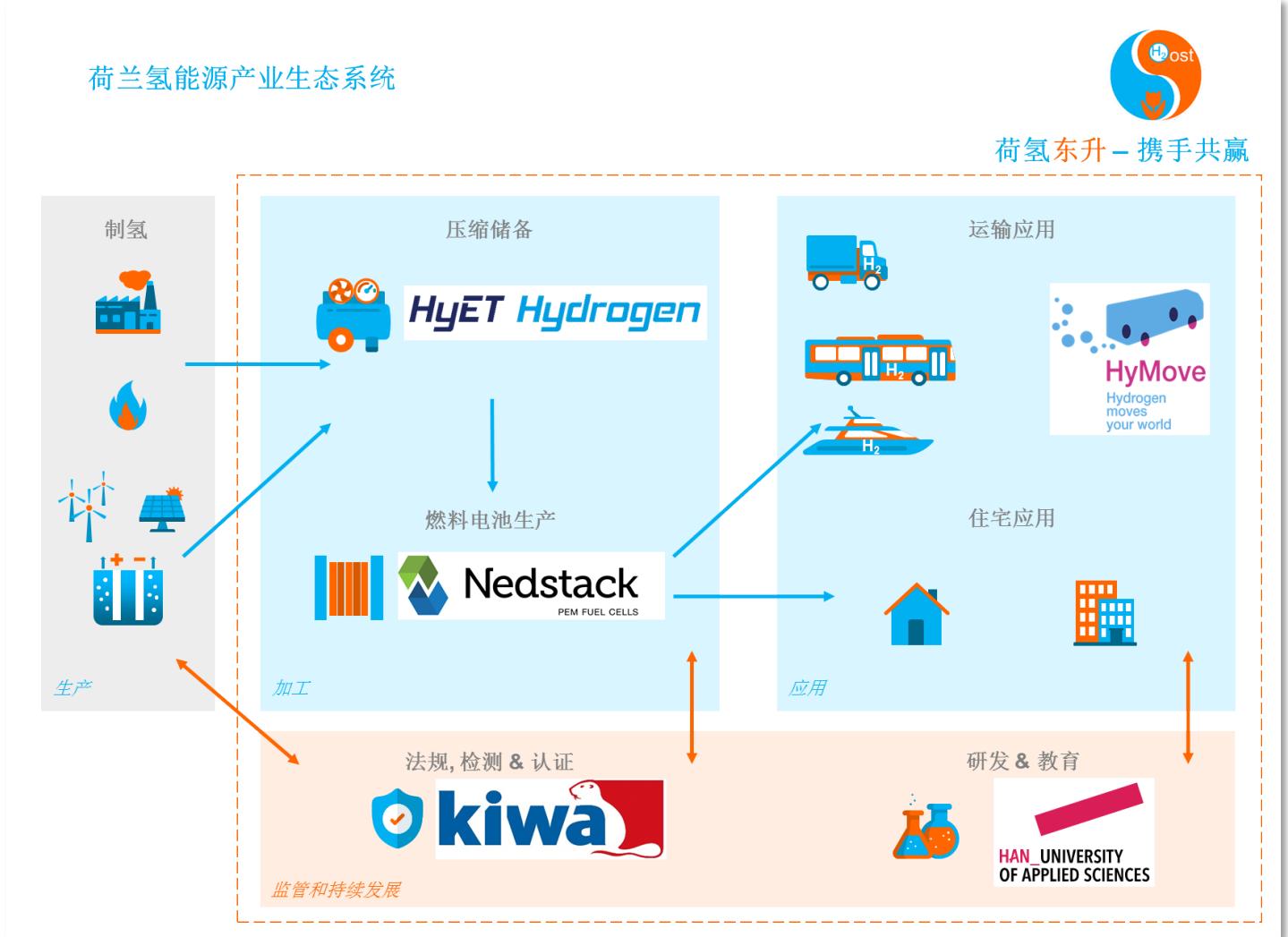


荷兰中小型企业掌握着
氢能源产业的关键技术
Key technologies are in
the hands of SMEs

荷氢联盟成员及技术领域 HyNed partners and hydrogen eco-system



- 制氢
- H₂ production
- 压缩储备
- Purify and compression
- 燃料电池电堆
- Fuel cell stacks
- 燃料电池系统开发集成
- FC power generation system
- 检测和认证
- Test and certification
- 监管政策和持续研发
- R&D and regulations





欧洲能源安全测试和认证的领先企业。在制氢，
运输，传送，储
氢和应用等领域，资历雄厚。服务项目主要包括
：

- 提供类别齐全的氢能研发和检测设备,无论是认
证前测试还是正式测试都可提供全套设备
- 供氢系统，基础设施审查
- 主要部件，器材和系统的欧盟标准以及国际标
准认证
- 在氢气应用领域提供全方位的咨询服务
- 为氢能领域的人才，政府机构以及基础设施和
应用方面提供培
训和资格认证

Kiwa is a world-leader in Testing, Inspection and Certification (TIC) and Training and Consultancy. We create trust in our customers' products, services, processes, (management) systems and employees.

With regard to energy, gaseous fuels and safety Kiwa has activities in

- Testing, Inspecting, and issuing Certificates, based on various Standardization schemes and our ISO 17025 accreditations,
- for creating trust in products, services, processes, systems and employees
- for assurance of safety and efficiency.

Regarding Hydrogen (low & high pressure) we offer our services in the areas:

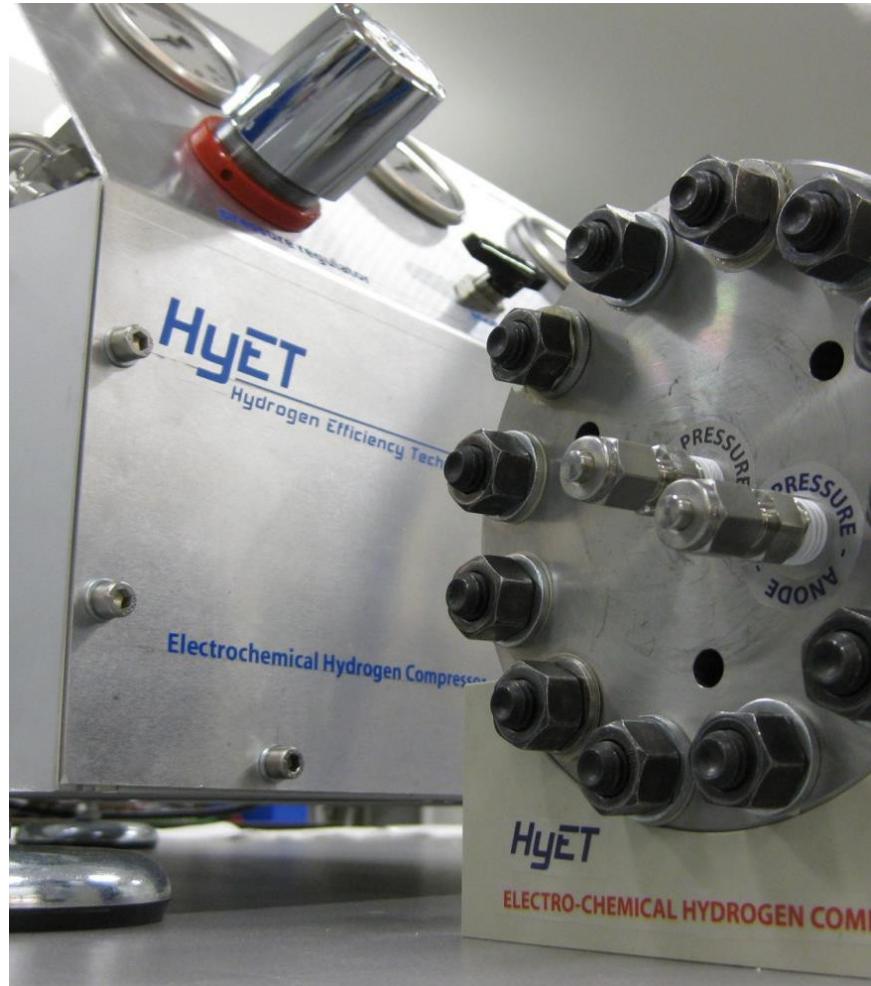
- Domestic & commercial infrastructure
- Mobility Sector (road, marine, train vehicles and filling stations)
- Industrial sectors & Power generation





HyET Hydrogen

- 独立研发的电化学式氢气压缩技术
- 可压缩至1000 bar
- 通过特殊质地的薄膜，同时进行纯化
- 是壳牌在美国特别甄选的加氢站合作伙伴
- HyET developed electrochemical hydrogen compression technology
- This technology enables the compression of hydrogen to 1000 bar over a single stage.
- The purification is done simultaneously with the compression process.
- The compressor has no moving parts makes noise and vibration free, lower cost than equivalent mechanical compressors.





HAN UNIVERSITY
OF APPLIED SCIENCES

汉恩大学应用科学部

- 是荷兰最大的5做应用理工大学之一
- 是荷兰首家特别为新能源应用提供工程硕士课程的大学，此课程面对全球招生。英文授课的课程方向包括：汽车系统，控制系统，可再生能源，嵌入式操作系统和精益化工程管理
- 同时为全球科研，公司和院校提供专项研究
- 正在组建共享氢能实验室，用于氢能应用技术和主要部件的研究和开发

HAN university of applied sciences:

- One of the 5 largest universities of applied sciences in the Netherlands
- The Master of Engineering Systems is English-taught and offers the following tracks:
 - Automotive Systems
 - Control Systems
 - Sustainable Energy
 - Embedded Systems
 - Lean Engineering
- Hydrogen Research Lab located at industrial park





荷兰氢电公司生产质子交换膜电堆

- 拥有世界领先技术和研发团队
- 公司生产燃料电池板并进行电堆组装
- 2017年为燃料电池系统生产电堆安装基础 700 多件
- 测试过的电堆使用寿命达23000小时以上
- 公司同时提供强大的安装应用辅助团队
- 在欧洲及中国都有广泛合作

Nedstack is PEM fuel cell stacks supplier with:

- Leading Global Player in PEM-FC R&D;
- In-house Cell plate production and Stack Assembly;
- > 700 FC Systems installed-base as per 2017;
- > 23.000 Hours in-use Lifetime demonstrated;
- Highly competent Application Support team in-house;
- Strong footprint in EU and China





适用领域:

Industries served:

- PEM 大型发电设备
PEM FC-Power Plants
- 商用燃料电池大巴增程设备
- Commercial Vehicle FC Range Extenders
- 船用燃料电池动力设备
- Marine Fuel Cell Power Modules
- 备用供电设备
- Back Up Power Supply Units





HyMove

Hydrogen
moves
your world

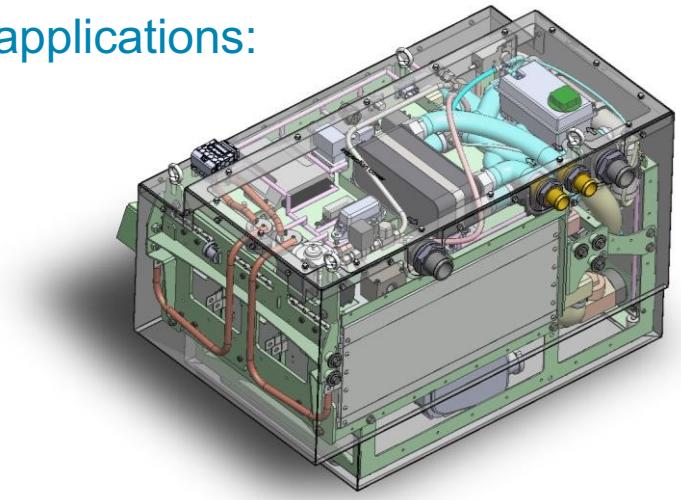
HyMove 是荷兰少数制造专门生产研发燃料电池系统的高科技公司。

公司主营即插即用的燃料电池系统，系统可广泛应用于：

- 机动车辆
 - 公交大巴，重卡，长途汽车
- 船用
 - 内河运输船只, 豪华游艇
- 工具车辆
 - 掘土机, 拖拉机, 碎木机
- 固定发电设备
 - 建筑工地, 活动现场

HyMove is a niche high-tech company that develops and implements Plug & Play Fuel Cell systems for a wide range of applications:

- Automotive
 - Buses, trucks, coaches
- Maritime
 - Inland ships, super yachts
- Machinery
 - Excavators, tractors, wood chipper
- Stationary generators
 - Building sites, events



荷氢联盟成员介绍 HyNed Partner introduction

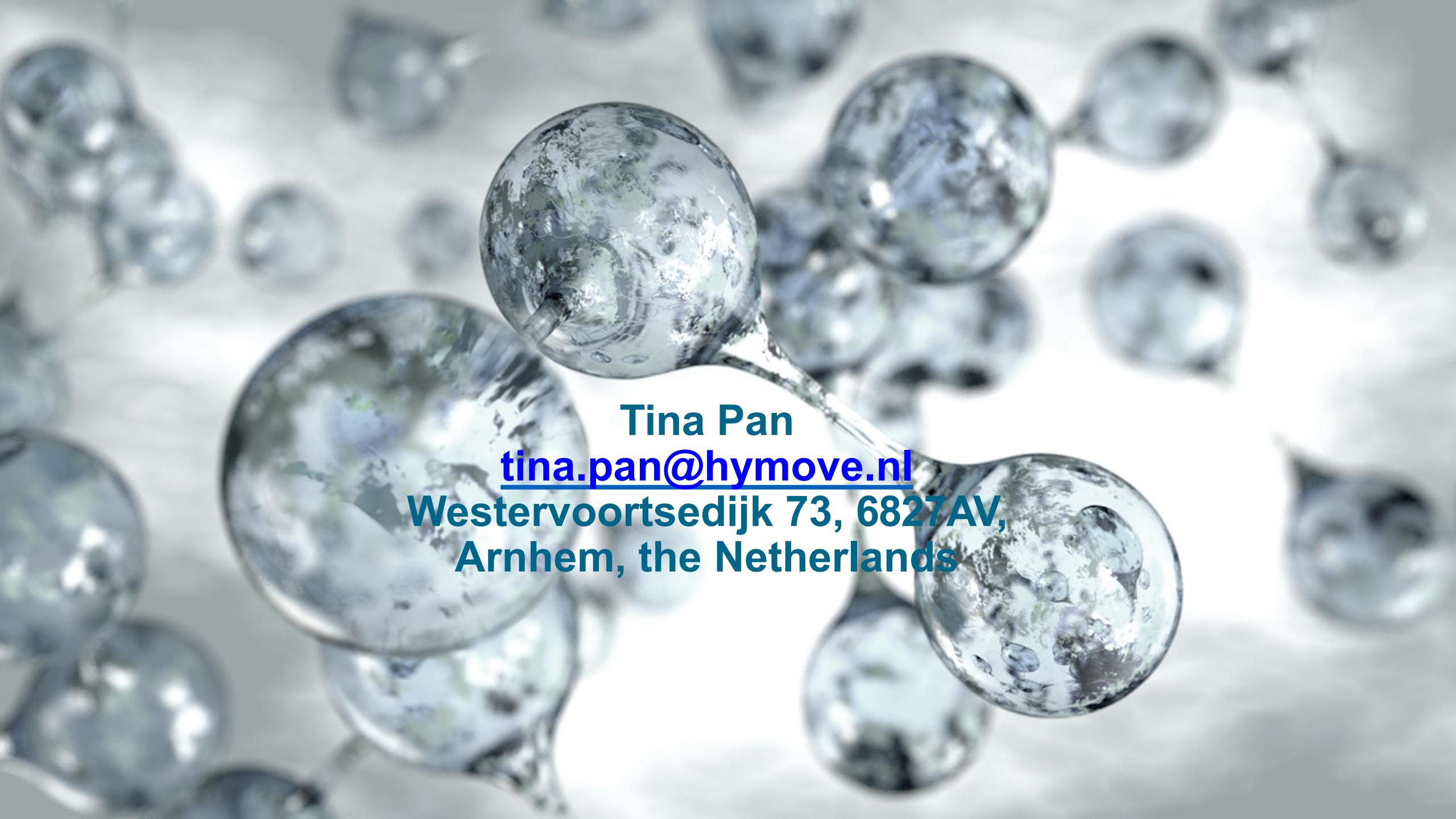


燃料电池系统设计制造供应商，主要用于重载应

Fuel cell power generation system for buses and heavy-duty application:

- 完整的即插即用系统，主要用于公交和卡车
- Complete plug and play system, mainly used for buses and trucks
- 最大输出功率：是同类产品的氢气消耗量的3/4
- Hydrogen consumption is 3/4 compare with other suppliers
- 超长耐久的系统寿命：30000小时
- Long lifetime : 30000 hours
- 自主研发的一体化，控制传动软件
- Self developed control software
- 实际操作和运行的可靠性在德国和荷兰公共交通系统内得到高度肯定
- HyMove FC buses currently operating daily in the Netherlands and highly recommended by German public transportation agencies
- 于2018年在上海车辆检测中心通过检验
- Passed the inspection in Shanghai Vehicle Testing Center in 2018





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