A revolutionary fuel additive with potential to change the fuel industry

FuelGems: A revolutionary fuel additive is ready for mass production — with potential to create a shock wave across the $3.5 trillion fuel market. And the biggest corporations in the world want in.

Diesel and gasoline will power 80% of all vehicles by 2050. Fuel has become more damaging to engines and is dangerous for the environment. The world needs a solution to make fuel clean today.

We believe we have created the only fuel additive for instant and continuous increase in mileage for gasoline and diesel engines, emissions reduction and engine protection.

We believe we have created the only fuel additive to give users positive up to 1000% ROI in the massive $3.5 trillion market.

Source: Energy Watch Group

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There are major problems with gasoline and diesel

Deadly emissions: Contaminated air and toxic emissions from dirty fuel cause over 5 million people to die annually

Fuel is expensive: Fuel is a huge expense that every company wants to minimize

Fuel became more corrosive: up to 70% more corrosive to the engine

Refineries need to differentiate fuel: fuel is currently a commodity that provides no extra value

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Solution by FuelGems

FuelGems decreases emissions:

- Decreases unburnt hydrocarbons by 50%
- Decreases carbon monoxide by up to 15%
- Decreases CO2 by up to 8%
- Decreases particulate pollution

FuelGems increases lubrication:

- Increases engine life
- Increases fuel pump life

Highly affordable (2 cents extra per gallon): Refineries can differentiate fuel and create new fuel class

Saves fuel: Up to 8% (users ROI up to 1000%)

Tiny amount needed: 1-5 grams per 260 gallons (a whopping 800x less than competing additives)

FuelGems

Highlights

Product market readiness:
ready to be mass produced

Direct market opportunity: **$30 billion+**

Fuel market:
3.5 TRILLION USD

Strong returns & environmental impact: users will achieve up **1000%+ ROI and reduce greenhouse gas emissions by up to 50%**

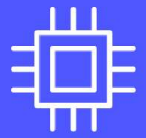
Key components of nanoparticle **80% to 95% cheaper** than comparable nanoparticles

Traction: **Integrated $20bn Oil&Gas company**, **farm company, $20bn retail chain**, over **90%** of drivers want to use the additive.

FuelGems

Highlights

5 years in development and testing: over **1 million** miles driven with the additive



Technology: next-generation nanoparticle for fuel savings

Patents by top-tier IP firm Knobbe & Martens.

Nanoparticle: **highly proprietary, one of a kind**, cheap to manufacture in bulk, and safe

Nanoparticles can be sold and used in other **multi-billion dollar industries** competitors

Comprehensive testing completed

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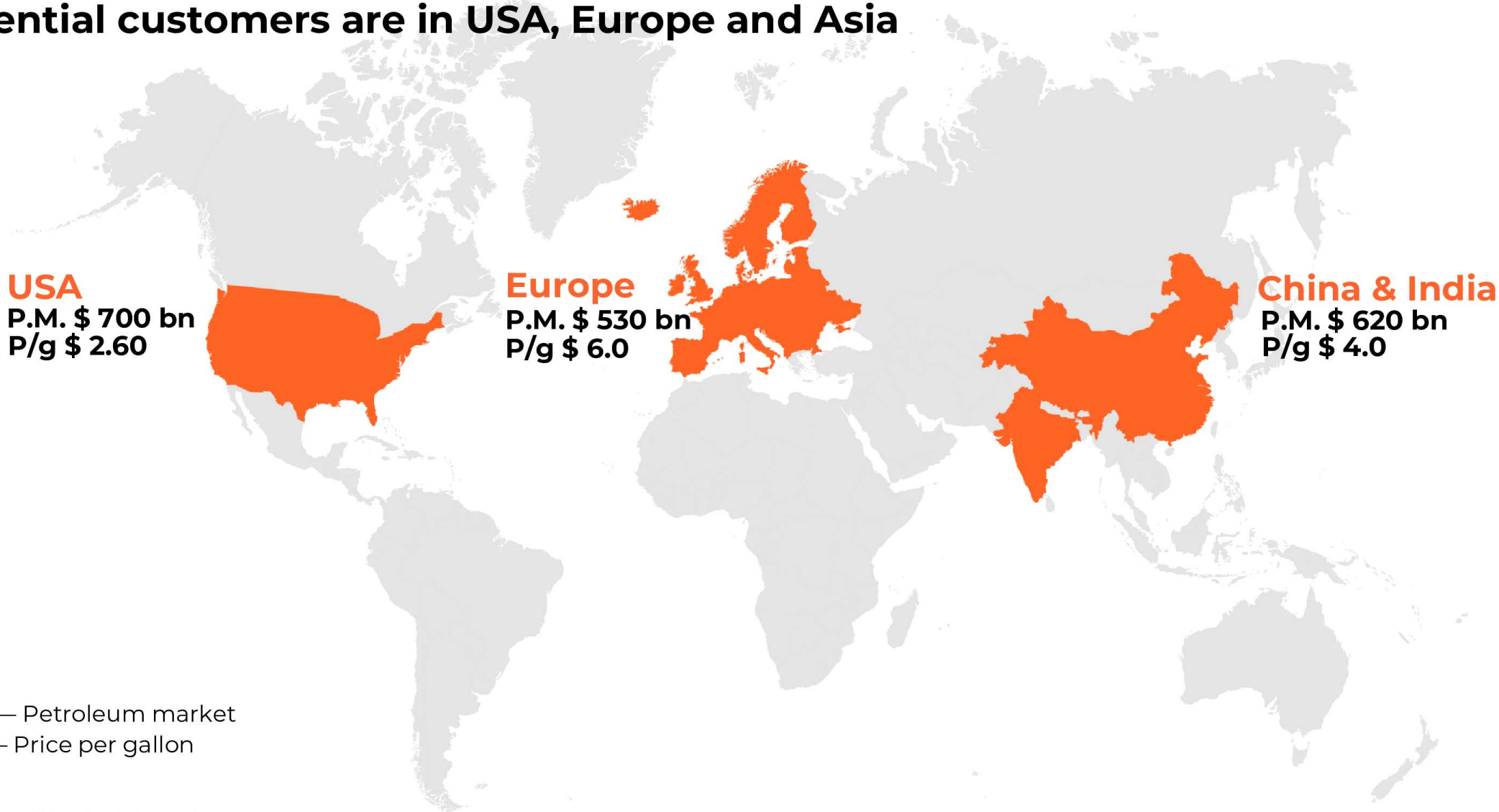
Worldwide fuel market is $3.5 trillion

Potential customers are in USA, Europe and Asia



*P.M. — Petroleum market
P/g — Price per gallon

Source: BP plc, Bloomberg

Sales pipeline traction

Pilot stage

OMV

OIL&GAS **$20bn+ revenue**

interest from BOARD OF DIRECTORS

Pilot stage

X5 Retail Group

RETAIL **$25bn+ revenue**

interest from VENTURE DIVISION

Pilot stage

Ovostar Union

FARMING **$100mln revenue**

interest from BOARD OF DIRECTORS

Pre-pilot stage

BP

OIL&GAS **$300bn+ revenue**

interest from CHIEF SCIENTIST

Pre-pilot stage

Marubeni

TRADING **$60bn+ Revenue**

interest from CEO

Pre-pilot stage

PKN Orlen

OIL&GAS **$30bn+ revenue**

interest from BOARD OF DIRECTORS

Pre-pilot stage

Suncor Energy

OIL&GAS **$30bn+ Revenue**

interest from CEO

Pre-pilot stage

Severstal

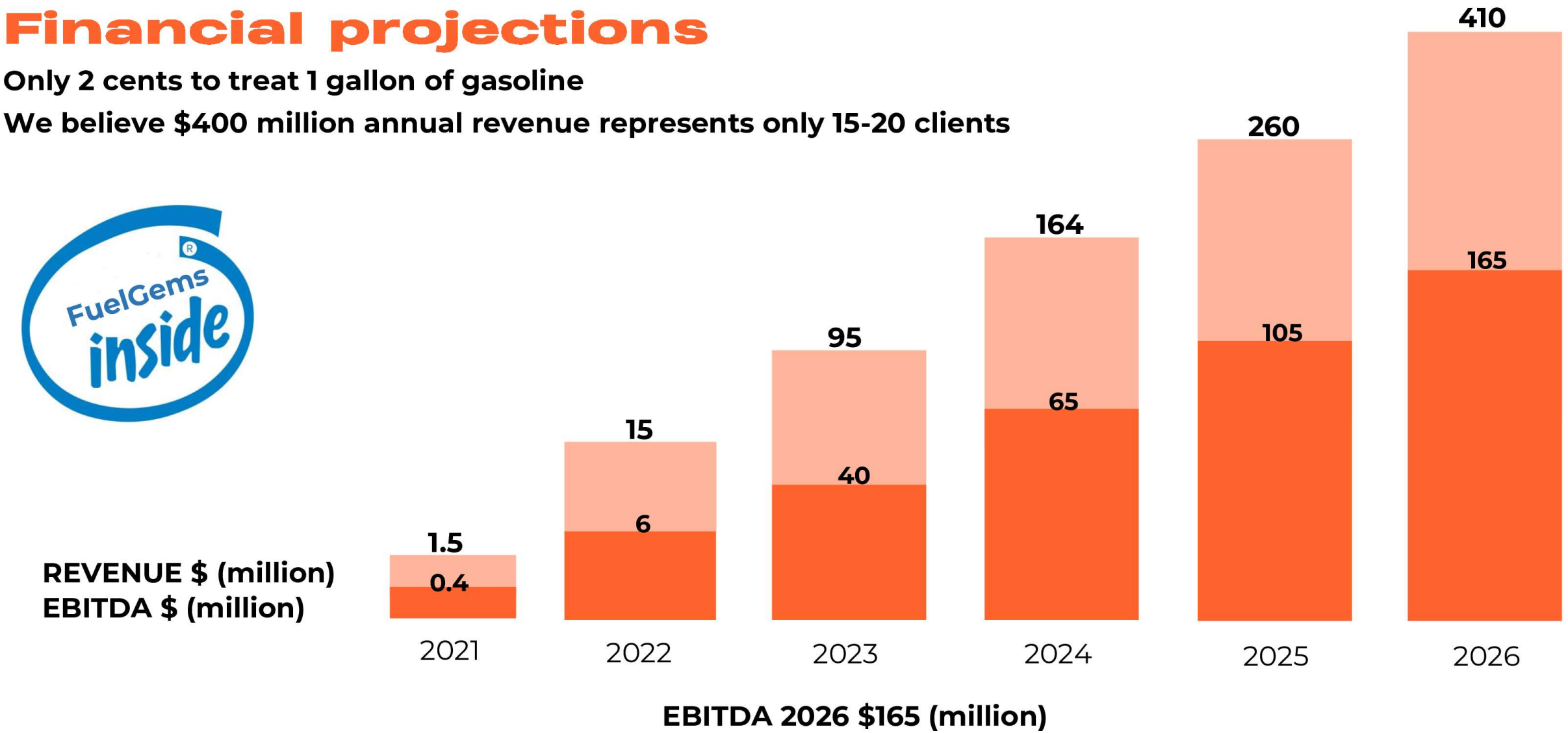
STEEL **$6bn revenue**

interest from INVESTMENTS DIVISION

Financial projections

Only 2 cents to treat 1 gallon of gasoline

We believe $400 million annual revenue represents only 15-20 clients



EBITDA 2026 $165 (million)

*Theses are forward-looking projections which CANNOT be guaranteed.

FuelGems

Prospective clients and go to market strategy

FuelGems pilot clients are corporate fleets and refineries. Gas Station Operators and Auto Retailers are next.

Refineries

ExxonMobil
Shell
bp
Chevron
Total
Valero

Gas Station Operators

Sunoco
Circle K
ARCO
Phillips 66
Pilot Flying J
Conoco

Chemicals for Fuel

BASF The Chemical Company
Dow

Corporate fleets

Walmart
Good things come from Sysco
Coca-Cola
pepsi
HALLIBURTON
US Foods

Logistics

DHL
J.B. Hunt
XPOLogistics
Ryder
FedEx
Kuehne+Nagel

Auto Retail

O'Reilly Auto Parts Professional Parts People
AutoZone

Used Car Market

lyft
Uber
Taxi 24|7
GO-JEK
Easy Taxi
DiDi
Grab
VIA VAN

FuelGems market potential is $30 billion

Revenue from fleets
Fleet fuel consumption in top 20 countries

$500 Billion X 8% Savings X 20% of Savings = $8 Billion

Revenue from drivers
Top 20 countries

$1.6 Trillion X 8% Savings X 20% of Savings = $26 Billion

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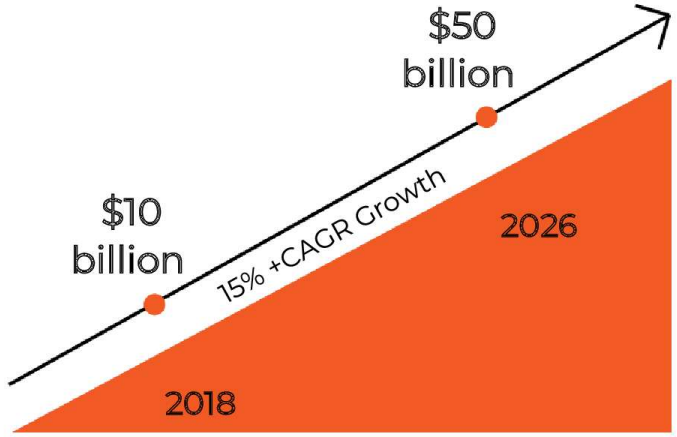
Fuel market is enormous while nanotechnology is one of the fastest growth technology sectors



Nanoparticle market is red hot: **$10 billion in 2018 to $50 billion in 2026**: 15%+ CAGR Growth

Nanoparticles will be used in products that represent over **$2 trillion** in the global economy

Fuel market is **$3.5 trillion**.

Nanoparticles are amazing because they greatly enhance materials. Our nanoparticles improve gasoline and diesel.

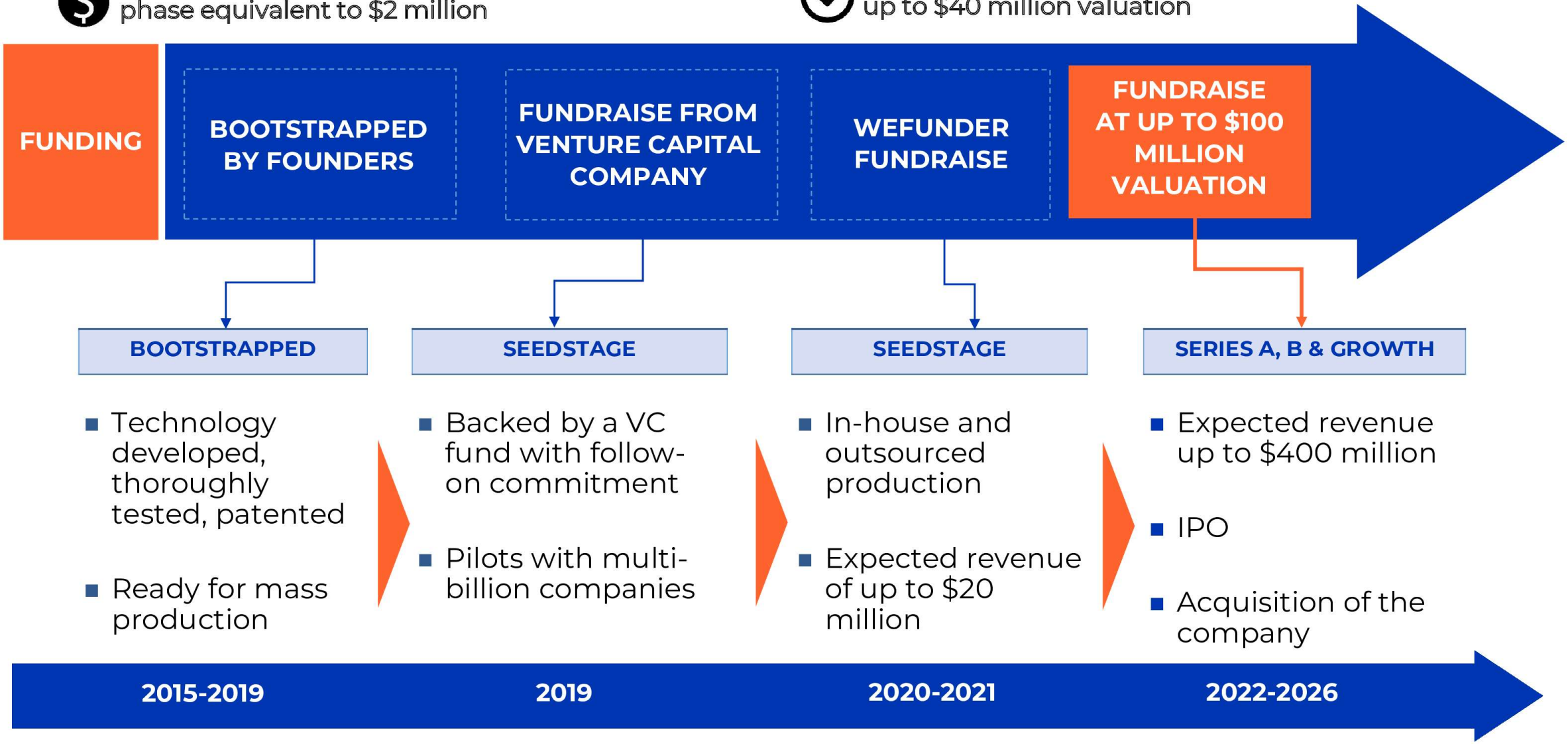
Source: MarketsandMarkets, Futuremarketinsights, European Commission

*Theses are forward-looking projections which CANNOT be guaranteed.

Development timeline

Development costs of bootstrapped phase equivalent to $2 million

Planned Series A raise of $10 million at up to $40 million valuation



Industry exits and financings

Fuel additives were involved in **120 deals** with deal value over **$200 billion**

Gulf	acquired	Houghton	**$1 bn**
Flint Hills Resources	acquired	Huntsman	**$415 million**
Halliburton	acquired	Athlon Solutions	**$100+ million**
Afton Chemical	acquired	North American Fuel Additives Business	

Active buyers are multi-billion dollar corporations

Chevron, Sinopec, Hyundai Oilbank, Afton Chemical, Koch, Smith, bp, Saudi Aramco, SHV

Nanotechnology for energy conservation: selected financings

NanoMech	Nanomech: nanotechnology, energy and lubrication **raised $40 million**	Active growth
nano-c nanostructured carbon	Nano-C: nanotechnology, renewable energy, electronics **raised $17 million**	Active growth
NIS Nanotech Industrial Solutions	Nanotech Industrial Solutions: oil additives **raised $97 million**	Active growth

Source: Capital IQ, Crunchbase

Current fuel additives are expensive and lack performance

low price

FuelGems additive

restores engine to baseline performance levels

continuous performance above baseline

Chevron Techron 65740

Royal Purple 11722

Redline 60103

Lucas 10013

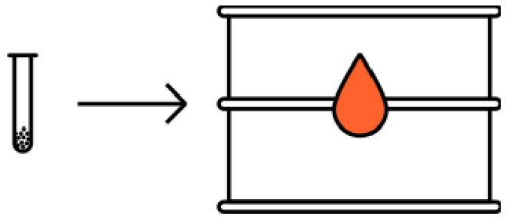
BG 44K

high price

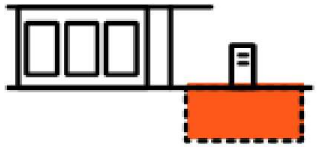
For customers FuelGems is an easy solution with high performance and low price.

FuelGems can price its additive 5 to 20 times cheaper than competitors and as a result we believe we will win a large market share very quickly.

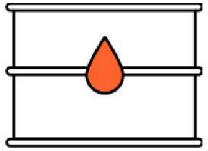
How it works



A tiny amount: 1-5 grams of nanoparticle
“FuelGems" is needed per 1 ton (1000 liters) of fuel



Easy for commercial users: just add to large fuel storage tanks



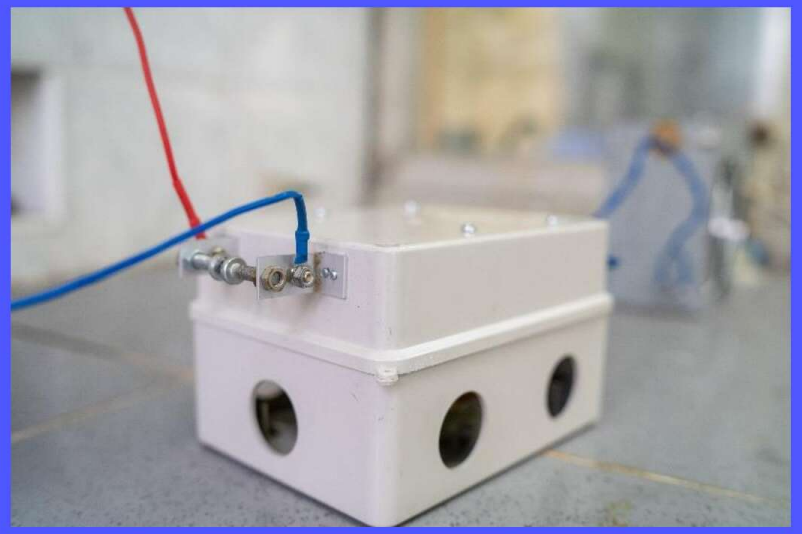
Easy for refineries: just add to large fuel storage tanks

Easy for drivers: just add to fuel tank when filling up

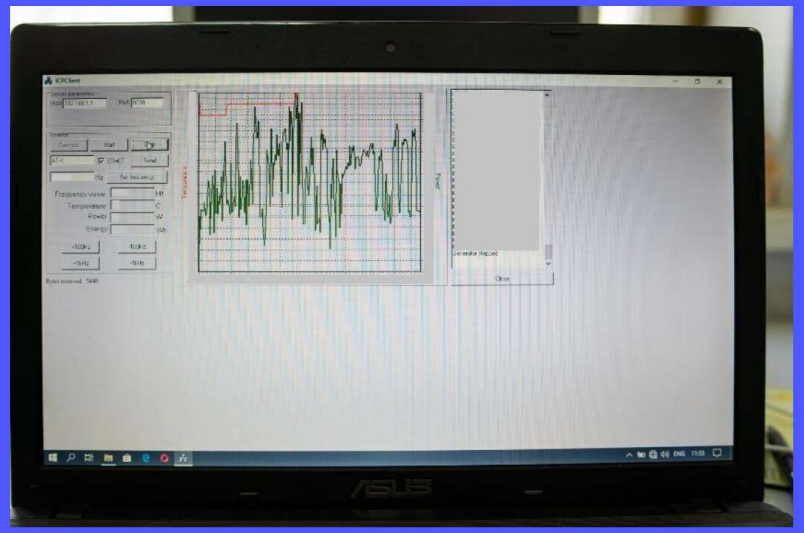
$10 purchase saves up to $80 = 700% ROI

Our nanoparticles are made mostly from carbon. EPA allows registration and usage of fuel additives which are made from Carbon, Hydrogen, Nitrogen, Oxygen and Sulfur

How it works



Reactor is a small device which easily fits on a laboratory table



Reactor is controlled by a software program

One small unit produces nanoparticles to treat 20 tons of fuel per day

- ✓ **Proprietary reactors and methodology to produce high amounts of nanoparticles at very low cost.**
- ✓ **10-50 reactors fit in a small laboratory.**
- ✓ **The technology and production is inexpensive and efficient.**

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Proprietary and patented know-how

Unique and proprietary production method, unique nanoparticle and its stabilization

Production method: unique knowhow in electricity usage to form and apply plasma

Chemical compounds: synthesis of unique spherical carbon nano-sized clusters

Stabilization: nanoparticle is stabilized to disperse easily in fuel and avoid conglomeration for long life of nanoparticle in fuel

Top-tier IP law firm, Knobbe Martens filed the patents

Knobbe Martens
INTELLECTUAL PROPERTY LAW

FuelGems

Technical validation

Extensive university testing

Nanotechnology, atomic, molecular and chemical testing

- Atomic force microscopy
- Transmission electron microscopy
- Scanning electron microscopy
- Raman spectroscopy
- Infrared spectroscopy
- Oxidation testing
- X-ray fluorescence spectroscopy
- Qualitative chemical analysis
- Energy-dispersive X-ray spectroscopy

Tribology and friction

- Tribology and friction testing: measurement of friction
- Tribology and friction testing: liquid phase electron microscopy
- Tribology and friction testing: differential-phase laser scanning profilometer
- Tribology and friction testing: fuel pump, testing surfaces of various fuels

Internal combustion engine testing

- Internal combustion gasoline engine bench test
- Internal combustion diesel engine bench test
- Internal combustion engine gas analyzer tests
- Real-life testing over 1,000,000 miles driven in real cars

Comprehensive testing to fully examine the nanoparticles, their mechanism of action and effects: anti-friction and anti-oxidation

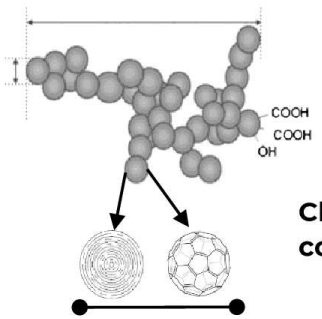
Technical validation

CONN CENTER FOR RENEWABLE ENERGY RESEARCH

Nanotechnology testing

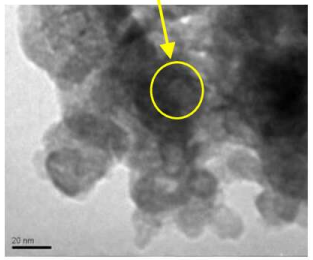
Size of particles

Structure

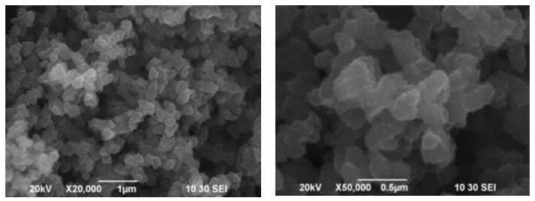


Chemical composition

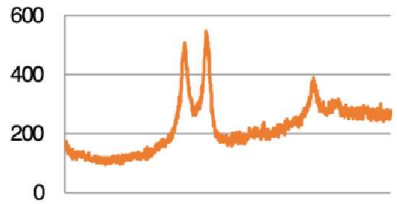
1-40 nm



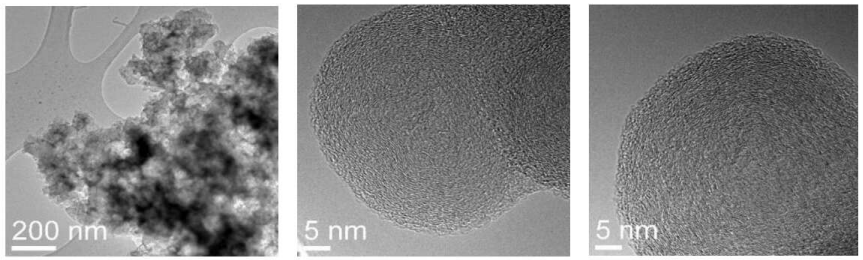
Scanning Electron Microscope



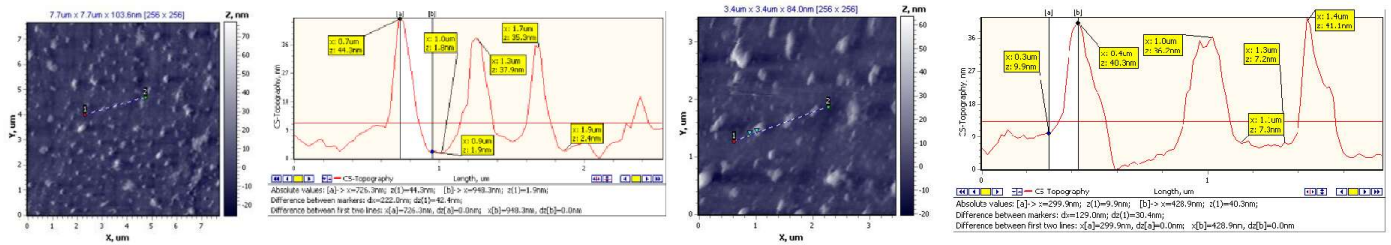
RAMAN Spectroscopy



Transmission Electron Microscope: Average size of domain in ethanol is 400 nm with average size of a separate nanoparticle of 6 nm



Atomic Force Microscopy: the nanoparticles are separated and packaged, ready to be added to fuel



Technical validation

Testing at universities and in real life

University snapshot testing using diesel engine (reduction of fuel use/increase in mileage)

Fuel no additive	0
Fuel with FuelGems	**8%**

University snapshot testing using gasoline engine (reduction of fuel use/increase in mileage)

Fuel no additive	0
Fuel with FuelGems	**7.5%**

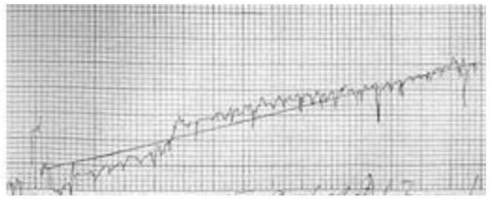
Fuel pump shaft

Fuel no additive

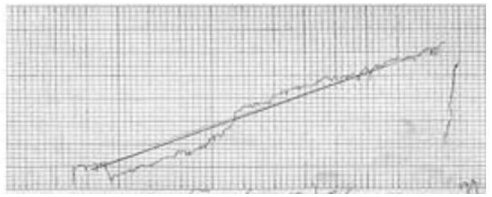
Fuel with FuelGems

Wear profilogram

Fuel no additive

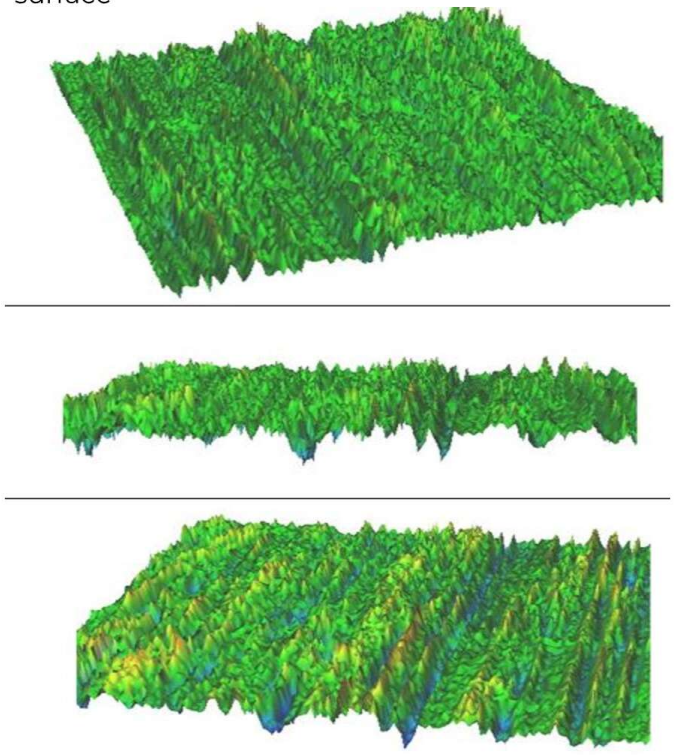


Fuel with FuelGems

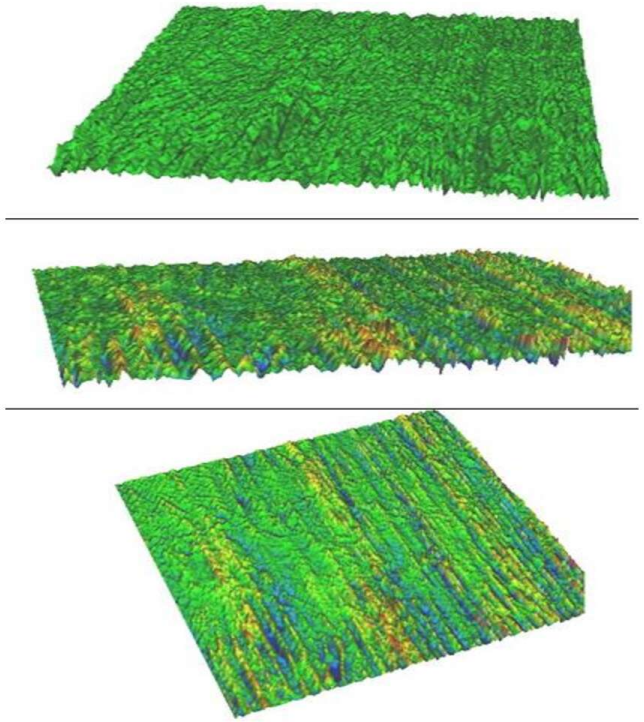


Liquid phase electron microspore

Surface friction of regular fuel – rough surface



Surface friction of fuel with **FuelGems** – smooth surface

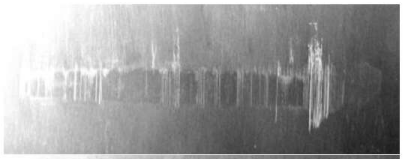
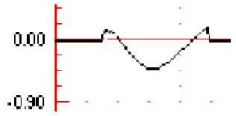
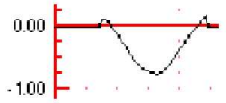
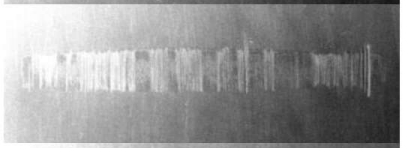
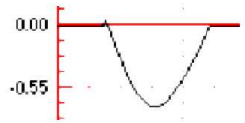
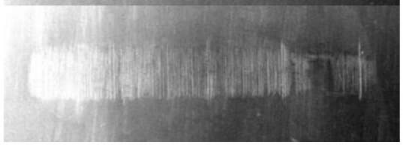
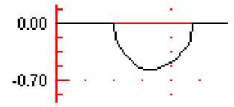


Real life testing

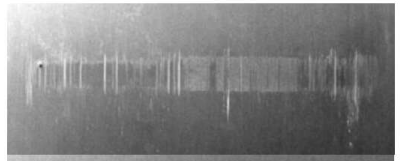
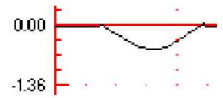
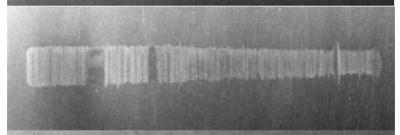
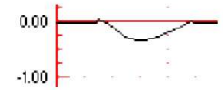
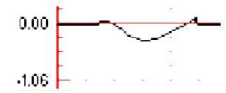
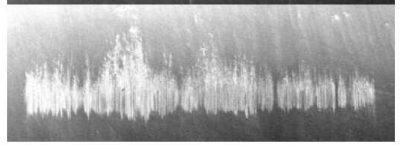
Cars drove over **1 million miles** with the **additive**

Surface scan of friction of fuel with additive

E-85 fuel*

Trial	The appearance of the friction trace	Average wear, micron	Profilogram of the trace
1		0.6	
2		0.8	
3		0.5	
4		0.7	
Score mark		0.5	

E-85 fuel with additive*

Trial	The appearance of the friction trace	Average wear, micron	Profilogram of the trace
1		0.3	
2		0.6	
3		0.4	
4		0.4	
Score mark		0.1	

*8 kg axial load, the rotation speed of the contra-sample 300 rpm.

Nanoparticles reduce friction wear by up to 80%

Technical validation

Engine cell testing Coventry University

Jaguar Land Rover (JLR) engine used for testing

Dosing:	**3 to 5 grams per 1 ton of fuel**
Reduction of Unburnt Hydrocarbons:	**50%**
Reduction of Carbon Monoxide:	**14%**

There were no adverse effects to the engine

Our nanoparticles can be used in multiple large markets

FuelGems believes it can sell its nanoparticles 90% cheaper than competition

$3.5 trillion
petroleum fuel **increases mileage by reducing consumption of gasoline and diesel**

$24 billion (2023)
capacitors **improves performance**

$50 billion (2023)
industrial catalyst **increases production of styrene**

$140 billion (2026)
lithium ion batteries **improves performance**

$165 billion (2021)
lubricants **improves lubricating effect**

Source: Beilstein Journals, Researchandmarkets, Knowledge Sourcing Intelligence, Marketsandmarkets

FuelGems

Team

Kirill Gichunts

CEO

Microsoft
EastOne (venture capital)
Semi-finalist Cleantech Open
KBC Securities
Raiffeisen/Lazard
Deloitte
Hilspen Capital Management
Global Asset Capital

UC Berkeley

Jacek Jasinski, PhD

Nanotech Scientist

Conn Center for Renewable Energy
UC Merced
Lawrence Berkeley National Laboratory

UC Berkeley, Warsaw University

Dmitry Vinnichenko, PhD

Scientist

National Academy of Sciences of Ukraine

National University of Shipbuilding

Yaroslav Bereznitskiy, PhD candidate
Chemical Engineer

National Academy of Sciences of Ukraine

National Aviation University

Roman Tarasov, PhD candidate
Chemical Engineer

National Academy of Sciences of Ukraine

National University of Food Technologies

Cranfield University

Dr. Tim Rose, advisor, automotive engineering, Cranfield University

FuelGems

Successful venture track record and startup exits

Kirill Gichunts has successful venture experience and startup exits

Managing Partner at EastOne's VC accelerator;
Invested and mentored over 15 companies.
Selected investments:

- Kabanchik **acquired by Prom.ua**
- Preply, growth stage, **raised 15 million USD** — Active growth
- PromoRepublic , growth stage, **raised 4.3+ million USD** — Active growth
- Poptop, Series A stage, **raised 1 million USD** — Active growth

Founding team member of Silicon Valley start-up InFreeDA **acquired by AT&T (NYSE:T)**

Advised Microsoft on launching technology accelerator **Cloud Business City**

Semifinalist of **Cleantech Open**

During his career, Kirill has developed relationships with corporations and governments

Use of funds and next steps

- ✓ Designed a unique nanoparticle
- ✓ Secured patent
- ✓ Designed cost-effective technology to manufacture the nanoparticles
- ✓ Treated and stabilized the nanoparticle to effectively dissolve and disperse in fuel
- ✓ Modeled mass production of nanoparticles
- ✓ Verified the technology via numerous tests at multiple universities
- ✓ Built core management and scientific team
- ✓ Built business model and proved high customer demand

- o Set-up mass production of the additive
- o Grow revenue
- o Secure further patents
- o Build sales and marketing to increase revenue growth

FuelGems

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