

# SMALL TECH. BIG SOLUTIONS.



**SINCE 2005 WE'VE HELPED SCORES OF COMPANIES SPEED THEIR PROJECT DEVELOPMENT. FROM NEW IDEAS TO ONGOING PROJECTS, WE'RE HERE TO HELP.**

## EARLY-STAGE IDEAS

We specialize in helping **companies and individuals with early-stage ideas** to **invent, develop and prototype** those ideas into **valuable products**. We dedicate a custom team from our roster of 23 veteran consultants to provide projects with **targeted expertise to accelerate success**. We maneuver projects through some proof-of-concept phases for as little as \$5K - \$45K to get them solidly started on a sound development path.

## YIELD IMPROVEMENT

SmallTech's team knows the nitty-gritty details of **getting MEMS-related wafer fab to work**. We can help you prevent problems before they happen. And we can help **solve existing yield problems** by bringing a fresh and experienced eye to the situation.

## NANOTECHNOLOGY

We provide expertise on nanomaterials, nanofabrication, prototyping, materials analysis at the nanoscale, device physics, nano-based medical devices, bio-nanotech, and IP evaluation.

## DUE DILIGENCE

On the business side, our team **offers deep experience from countless due diligences and company evaluations**. We can evaluate a company's IP, management and technical experience, technology and development path, and potential roadblocks along the way.

## IP AND BUSINESS STRATEGIES

Our team can help **develop strategies in a broad range of disciplines**.

**SMALLTECH  
CONSULTING**

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### OR GIVE US A CALL

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# WHAT OUR CLIENTS HAVE TO SAY ABOUT US

## A MAJOR PHARMACEUTICAL COMPANY

"The SmallTech Consulting Team provides creative, advanced drug delivery technologies, fueled by their deep expertise and authority in MEMS-based sensor technologies and drug delivery subsystems for pharmaceutical applications. This is by far one of the most competent teams I have worked with and I would recommend them for future collaboration." — *A former Technical Lead at Eli Lilly & Company (MEMS and drug delivery technologies)*

## A FORTUNE 500 MEDICAL COMPANY

"Dr. Leslie Field and her team at SmallTech were involved in our MEMS product development project from ideation through prototyping and were fundamental in each phase. ... Dr. Field's work during the concept and initial design phases of our project was particularly strong as she is impressively creative and, combined with her extensive experience and background in the field, she delivered a multitude of design options to meet our product specifications. She has a great working relationship with several foundries and worked directly with them to deliver timely prototypes." — *A manager in an international Fortune 500 medical company (MEMS landscape, invention, design, prototyping)*

## AN AEROSPACE MANUFACTURER

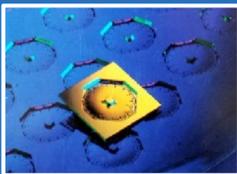
"SmallTech Consulting was a great temporary addition to our internal yield improvement team. They quickly came up to speed on the issue at hand and provided multiple solutions, including several that were quite unique and innovative. Additionally, they were proactive and great to work with! We will certainly use them to supplement our efforts in the future." — *A large aerospace manufacture (Yield improvement in MEMS production)*

## A VENTURE CAPITAL FUND

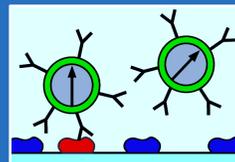
"SmallTech Consulting performed technical diligence for us on a biomedical MEMS opportunity. Leslie and the team were fantastic to work with. They truly are domain experts and brought valuable insight and a wealth of relevant experience. They understood our needs as investors and gave us exactly what we needed, while sticking to a tight timeline." — *Anthony Natale, M.D./ Prism VentureWorks (Technical due diligence)*

## A STARTUP CEO

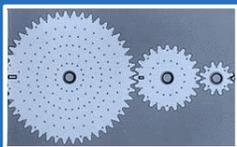
"My company has worked with SmallTech on projects across several disciplines including MEMS, displays, optics, and IP. We have found SmallTech to be a trusted advisor to and integral extension of our company. SmallTech's core team represents a unique cross-section across many functional areas and sectors of hightech and is truly outstanding." — *A startup CEO in optics & displays (Assessment & development of IP & business strategies)*



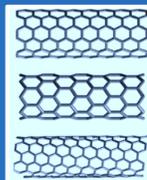
A circular bimetal nickel-on-silicon actuator for a gas-control microvalve, in a silicon chip 10 mm square. The central boss seals against an orifice in a separate silicon chip, not shown, to form a proportional-control gas valve. (Photography by Jim Karageorge, used with permission.)



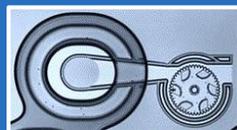
Magnetic nanobeads decorated with antibodies attach to a target on a surface.



The world's first involute-toothed micromachined silicon gears, made with polycrystalline silicon.

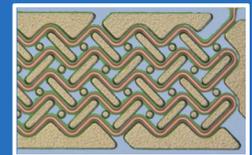


Three chiral forms of single-walled carbon nanotubes

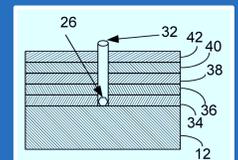


A liquid-driven micro-turbine.

A tungsten heater resistor encased in stress-matched silicon nitride, for operation from -55 degrees C to 500 degrees C.



Atomic layer deposition builds platinum electrodes 36,40 and aluminum oxide insulators 34,38,42 around a grown-in-place carbon nanotube 32. (US Patent 7553730)



**THE FIGURES ABOVE** display some of SmallTech's expertise in MEMS and nanotechnology including silicon microvalves, bimetallic actuators, carbon nanotubes, surface micromachining in polycrystalline silicon, micromachined gears, high-temperature tungsten resistors suspended in silicon nitride membranes for thermal conductivity detectors and flow sensors, microfluidics, micro-turbines, magnetic nanoparticles for biological experimentation, synthetic nanopores, and atomic layer deposition.

**WHAT WE CAN'T SHOW IN PICTURES** includes our expertise in bringing ideas to market, system integration, IOT, 3D printing, laser machining, displays, general know-how in business and engineering, and a long record of invention embracing both potato chips and silicon chips.