FROM RESEARCH TO INDUSTRY

cea tech

PRESS REVIEW 2020

1st semester

Information and Communication Technologies

Published on 13 January 2020

New hope for children with motor impairments

The EU MOTION project is investigating solutions to improve the quality of life of children with neuromotor disorders. A bionic rehabilitation technology will be developed, tested, and implemented under this EU-funded initiative.

Published on 20 January 2020

Morphosense sets sights on offshore oil & gas market

After a successful fundraising round in late 2018, Morphosense has reached a new milestone, earning ATEX Z1 and Z21 certifications for its NEURON system. ATEX certifies conformity with EU regulations for equipment used in potentially explosive atmospheres containing gases and dusts.

Published on 6 February 2020

Kalray sets sights on Chinese market

Kalray, which completed its IPO last year, recently signed a distribution contract that will bring its intensive computing solutions for artificial intelligence to the rapidly-growing Chinese market.

Published on 10 February 2020

New point-of-care blood tests coming soon

A cohort of around 10,000 patients on blood thinners will soon have access to an out-of-hospital care pathway for their regular monitoring needs. Avalun is helping create the new pathway with its connected miniaturized lab.

Published on 20 February 2020

New advances in Li-Fi

A smart Li-Fi orchestrator was presented at CES 2020. It automatically detects any interference between lamps and optimizes the data transmission rates for each device on the network.

Published on 25 February 2020

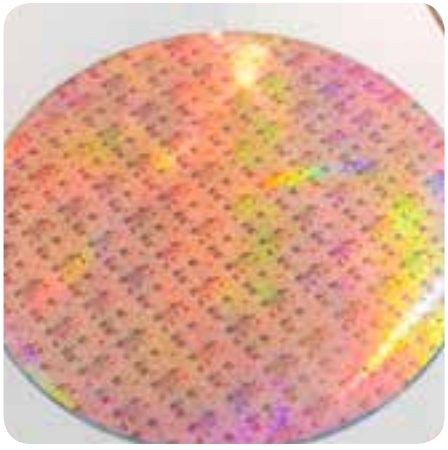
NuVISION, the gamma camera that can multitask

NuVISION, commercialized by NUVIA, is the world's first four-in-one gamma camera. It was recently approved by the 2024 Paris Olympics security committee.

Published on 9 March 2020

Startup Scintil Photonics ready to prototype

Scintil Photonics, a spinoff of Leti, a CEA Tech institute, recently raised €4 million. The company will use the influx of funds to produce prototypes of its circuit.



Published on 17 March 2020

A true second life for silicon

A new recycling solution for silicon wafers used for research purposes at CEA-Leti was recently implemented with an aluminum foundry in a win-win partnership!

Published on 3 April 2020

CEA-Leti earns international recognition

The fruit of thirteen years of R&D, the L-UTSOI transistor model developed by CEA-Leti was recently officially recognized as an international standard by the Compact Model Coalition (CMC).

Published on 28 April 2020

San Francisco air quality monitored by sensors from Grenoble

The city of San Francisco is keeping a close eye on air pollution with a little help from a startup from France and its real-time air-quality monitoring solution.

Published on 30 April 2020

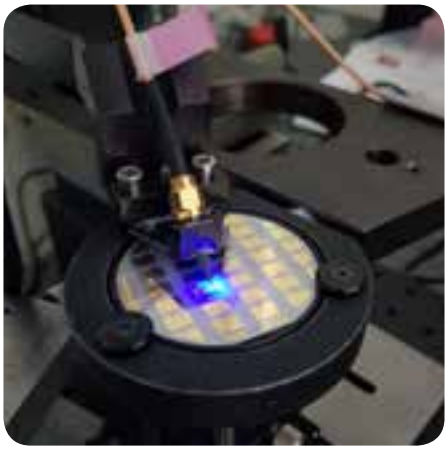
Fiber Bragg grating systems for monitoring in harsh environments

Regenerated fiber Bragg grating systems can withstand the combined effects of high temperatures and gamma and neutron radiation, making them potential candidates for structural health monitoring in harsh environments.

Published on 7 May 2020

A major advance in high-performance computing

CEA-Leti, a CEA Tech institute, unveiled a state-of-the-art demonstrator chip for high-performance computing applications at ISSCC 2020. The low-cost, energy-efficient processor is built on an innovative multi-core system that is both modular and expandable.



Published on 18 June 2020

A new LiFi data transmission speed record

Researchers at Leti, a CEA Tech institute, recently set a new LiFi data transmission speed record. Their secret? A micro-LED developed by Leti for a completely different use.

Published on 23 June 2020

Photonics could help improve traffic in data centers

Integrated high-speed, low-power, and low-cost data transmission solutions were developed under the EU H2020 COSMICC* project. The purpose of the project was to respond to exponential growth in data center traffic.

Technologies for healthcare

Published on 12 March 2020

Phoebe: a complete dose-simulation code

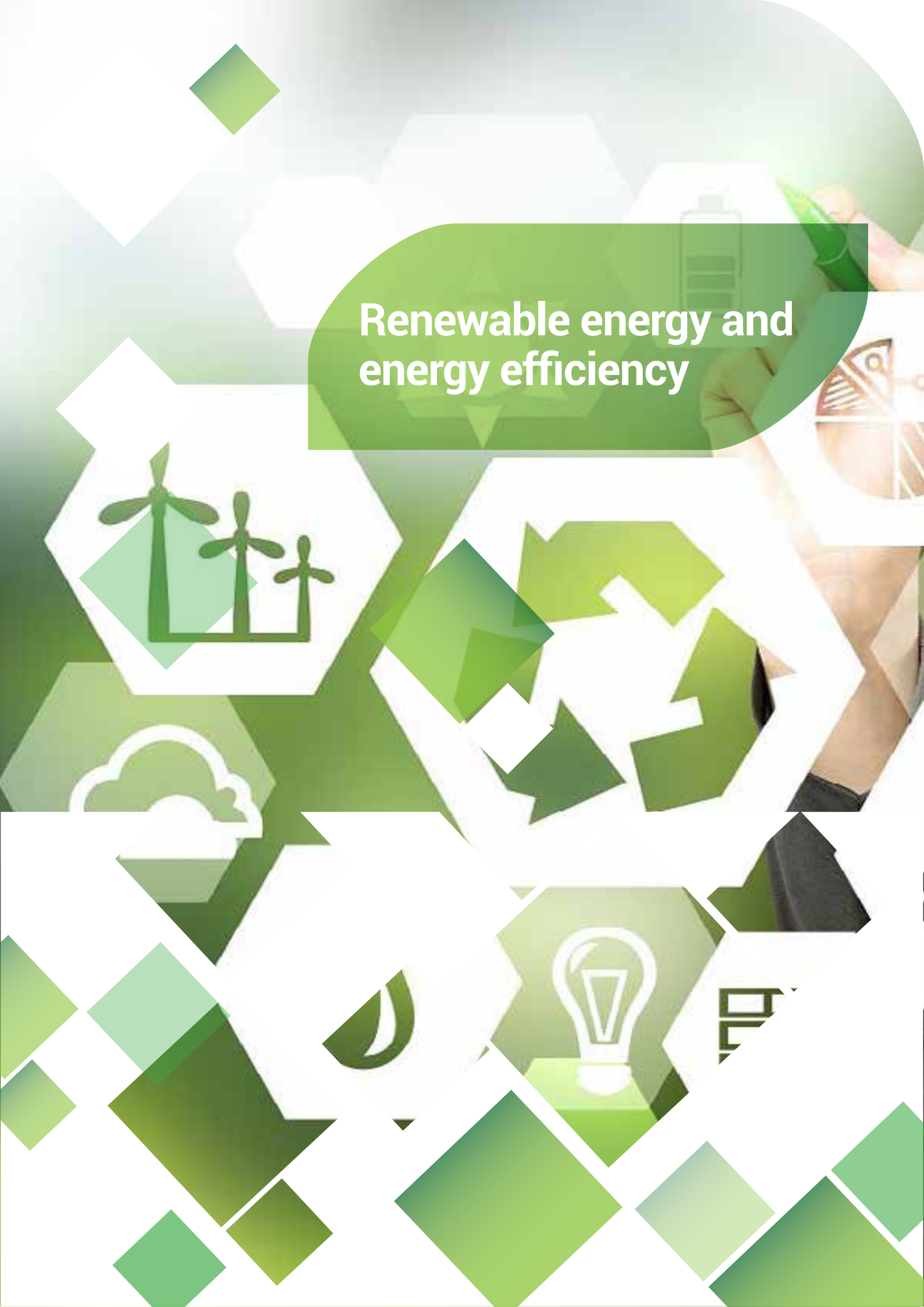
A powerful and modular new computing code was developed to simulate the dose of radiation received by patients during radiation therapy and medical imaging procedures.

Publié le 22 juin 2020

The Coriolis Nano particle collector capable of detecting airborne viruses

Coriolis Nano, commercialized by Bertin Technologies, was developed by Leti, a CEA Tech institute. The device, which can detect airborne viruses, could help prevent the spread of Covid-19.

Renewable energy and energy efficiency



Published on 16 January 2020

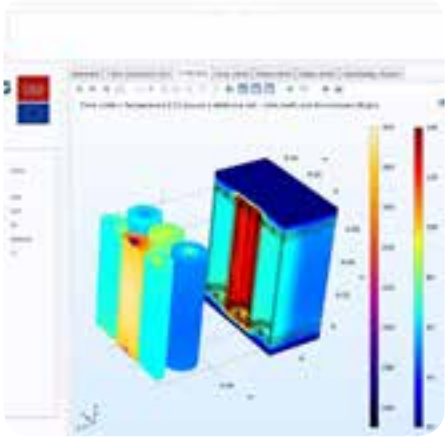
ENEL Green Power is investing in hetero-junction

By inaugurating the first industrial production line for heterojunction PV cells at its Catania plant, ENEL Green Power has just given a strong signal for the future of this technology.

Published on 23 January 2020

Fuel cell demonstrator to be used on board cruise ship

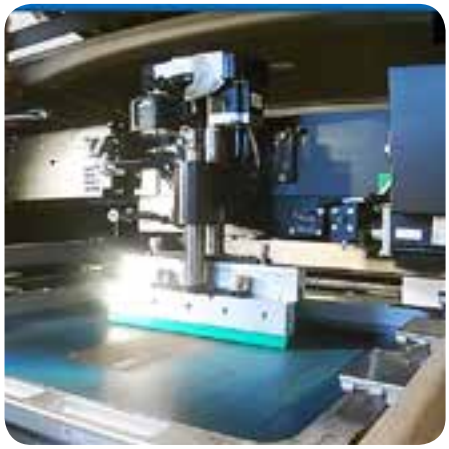
A 50 kW SOFC-type fuel cell will be installed on board the MSC Europa cruise ship (built by the Chantiers de l'Atlantique shipyard) in 2022. The project* is financed by French energy agency ADEME and marks a major step toward making cruise ships more environmentally friendly.



Published on 24 February 2020

Module-level simulation of thermal runaway propagation in batteries

A new computer-aided design tool will make battery packs safer by measuring the impact of dimensioning changes on the behavior of the battery packs. Specifically, the tool improves the evaluation of thermal runaway risk.



Published on 26 March 2020

Printed fuel cells could be just around the corner

A first-ever proof-of-concept of a 1 kW PEMFC stack made with printed components was recently completed. The technology is implemented using continuous processes, which reduces costs. However, it also promises to boost power densities.

Published on 25 May 2020

BIPV that works as good as it looks!

When it comes to functionally integrating photovoltaic modules into buildings, it is vital to address architectural concerns. Liten, a CEA Tech institute recently evaluated techniques to improve the appearance of building-integrated photovoltaic solutions

Published on 11 June 2020

Cooling batteries more efficiently

Liten, a CEA-Tech institute, is testing a diphasic-fluid-based cooling system for high-power lithium-ion batteries in research for the Carnot Network's REDBAT project.

Materials and processes

Published on 6 January 2020

Strategic permanent magnets that make more economical use of critical materials

The Poudr'Innov powder metallurgy platform is ramping up its strip-casting process for magnetic-phase synthesis, positioning Liten, a CEA Tech institute, as a leading developer of high-performance permanent magnets.

Published on 17 February 2020

SeaLive working to eliminate plastic from the oceans

The SeaLive project is developing 100% bio-based, recyclable, and/or biodegradable plastics from the starches in microalgae. The goal? To reduce the amount of plastic pollution in our oceans and on land.

Published on 6 April 2020

Protecting operators from nanoparticle exposure

Microelectronics manufacturers can now access exceptional nanoparticle detection and characterization resources to test their gas and liquid effluents

Published on 14 May 2020

Say goodbye to nitrogen oxides!

Nitrogen oxides, produced mainly when diesel fuel is burned, are harmful pollutants. Liten, a CEA Tech institute, recently modified automotive cabin air filters to effectively filter out nitrogen oxides at ambient temperature, improving air quality for drivers and passengers.

Published on 29 June 2020

Electronics mystery solved

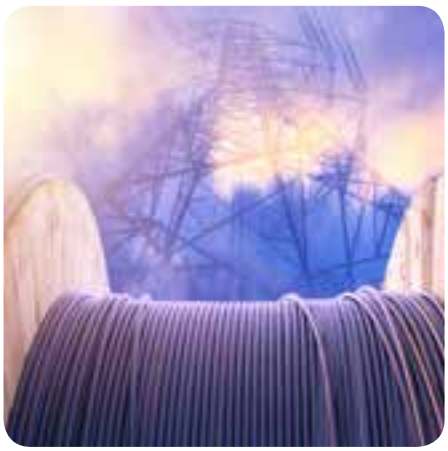
Resistive memory with revolutionary properties is made possible by a phenomenon known as ovonic threshold switching, or OTS. Researchers at Leti, a CEA Tech institute, recently shed new light on the topic.


Smart digital
systems

Published on 13 February 2020

Additive manufacturing: Parts can now be inspected as they take shape

Increasingly, additive manufacturing techniques are the choice for producing parts with very complex shapes. A new quality control process was recently developed to ensure that these parts are free from defects while they are being manufactured.



Published on 23 March 2020

Better supervision of medium-voltage electrical distribution networks

A system for detecting transitory faults on medium-voltage electrical distribution networks was developed to prevent power outages before they occur. It can detect and locate very early indicators of wear or damage to cables.

Published on 2 April 2020

Leaf: Verification of mixed-criticality embedded systems

A tool for the analysis and formal verification of the time properties of embedded computers is currently being developed at CEA-List. The goal is to control cohabitation and interactions by addressing the hierarchy between functions with different criticality levels.

Published on 9 April 2020

Bringing order to industrial tasks

A software suite to automate the optimization and validation of industrial process task scheduling was developed at FactoryLab.

Published on 5 May 2020

New version of LIMA shifts to deep learning

The LIMA language analysis engine now has deep learning modules that can analyze 60 languages with state-of-the-art performance.

Published on 12 May 2020

A portable, versatile radiological source detector

In the fight against nuclear terrorism, not all weapons are created equal. To help level the playing field, researchers recently developed a portable detector that is sensitive to both gamma and neutron radiation. Now a single device can be used to detect both types of radiological sources, even in crowds!

Published on 18 May 2020

Non-destructive testing: CIVA now even better!

CIVA*, developed by List, a CEA Tech institute, is the software of choice for non-destructive testing. With a host of new features in the 2020 version, CIVA's prospects for remaining the world's leading NDT software suite are excellent.

Published on 28 May 2020

Towards neural networks that can withstand attacks

At a time when artificial intelligence is making inroads into our everyday lives, List, a CEA Tech institute, is driving advances in cybersecurity that could result in more robust neural networks. CES 2020 provided an opportunity to showcase two demonstrator systems.

Published on 4 June 2020

CIVA will soon have its first Structural Health Monitoring tool

The latest version of the CIVA non-destructive testing (NDT) software platform developed by List, a CEA Tech institute, will be released soon. This latest release has a brand-new structural health monitoring (SHM) module developed specifically for metal and composite structures. This is the first SHM tool to be integrated into CIVA.

Published on 9 June 2020

Quantum algorithms put to the test

List, a CEA Tech institute, recently made an advance in quantum-computer programming with the development of a quantum program specification, programming, and formal verification environment.

And also...

Published on 17 January 2020

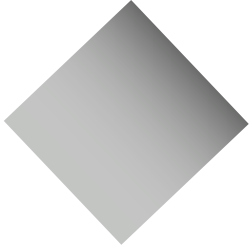
EasyPOC in the starting blocks!

The CEA and the Auvergne-Rhône-Alpes regional government recently kicked off a unique experimental innovation support program specifically for small and medium-sized businesses—the first of its kind.

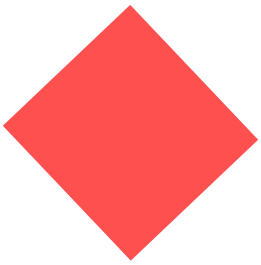
Published on 2 June 2020

Air quality and temperature regulation all in one

Ventilairsec partnered with Liten, a CEA Tech institute, on a residential HVAC solution that takes care of air quality and heating.







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