

HERALD OF RUSSIAN-INDIAN NETWORK

Introducing Academia to Industry ...



Almost all the institutions of higher education and all the science institutes are generating knowledge: new technologies, advanced technological processes or science products. But just a little number of these institutions is able to deliver this knowledge to industry. Problem of knowledge and technology transfer from Academia to Industry is quite urgent as for Russia, so for India.

Aiming to contribute to the filling this gap, in this issue we launch new section to introduce products and technologies, which have been developed in Academic sector and are ready for sale or transfer to Industry sector. We represent one technological product from Russia and one from India.

If you'd like the technology or product of your laboratory or department to be introduced here too, please contact us (main@rusidia.ru). Besides publication in 'Herald', we can also provide other services to promote your products and technologies in Russia and India, depending of the specifics of your science field. Let's make science output visible for industry!

*With best wishes,
Team of RC 'Russia-India: Bridging Education, Science, and Innovation'*



Issue 2, February 2017



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From Academia to Industry

Russian Glyoxal

Glyoxal is a high-purity material possessing a broad spectrum of activity and low toxic level. Since 1990's scientists from Laboratory of catalytic research (LCR) of Tomsk State University have been developing a glyoxal production technology. In 2008 the catalyst of glyoxal synthesis developed at the LCR was introduced by the *Glyoxal-T* LLC. In 2009 *Newchem* LLC enterprise has started glyoxal manufacturing with annual production capacity of 1000 tons. The production is based on the LCR developed technology. This makes Russia the eighth country in the world possessing glyoxal synthesis technology. Based on the developments of the laboratory issued in the form of patents and a know-hows, 6 innovative business enterprises have been established, including Novochem LLC (www.novochem.ru), Glyoxal-T LLC, Aldo-Pharm LLC, Compachem LLC, Sibchem LLC, CJSC "Aldomed" (aldomed.org).

Product: GLYOXAL, 40% Solution

Glyoxal is widely used in numerous modern industrial sectors:

chemical – feedstock in organic synthesis;

pharmaceutic – feedstock in production of drug substances (imidazole, tinidazole, metronidazole, dimenidazole and others);

medicine and agriculture – active disinfectant ingredient;

petroleum – basic agent component in hydrogen sulphide refining, active biocide agent in drilling fluids;

paint-varnish – PVA adhesive modifying agent, additives in water-based paints, bonding agents and primers as feedstock in low-toxic resin production;

wood-processing – additives in carbamide-formaldehyde resin to decrease formaldehyde emissions and to produce high-quality paper and cardboard types;

building and construction – additive modifier in concrete and dry pack mortar.

CHARACTERISTICS:

Glyoxal mass fraction	40±1
Density (20°C), gr/cm ³	1,20-1,35
pH	2-3,5
Package	polymer container: 20 — 200 liter

PRODUCT LIABILITY:

According to Russian State Standard GOST 12.1.007 this product is classified as hazard category 3 (moderately hazardous substance). Irritates respiratory tract, skin and eyes. Personal protective equipment (PPE): safety glasses, rubber gloves, protective clothes, respirator RPG-67 with cartridge "A"

Producer: «Novochem» Ltd/ CAS: 107-22-2 / Specific chemical identity: ethanedial / Molecular (chemical) formula : C₂H₂O₂

To purchase the product please contact

Company Group "Novochem"

Tel.: +7 (3822) 32-55-33, 309-488, 309-559

e-mail: info@novochem.ru

For S&T and R&D cooperation please contact

Laboratory of Catalytic Research

phone/fax: +7(3822) 20-04-19

e-mail: labcr@mail.tsu.ru

Opportunities for Startup Industries - Hybrid Composite Materials Technology by CSIR-AMPRI Bhopal

CSIR-AMPRI Bhopal is Advanced Materials and Processes Research Institute of Council of Scientific & Industrial Research. Its research areas are Light Weight Materials, Nanomaterials, Waste to Wealth, and natural fibre based building materials.

CSIR-AMPRI is equipped with up to date R&D facilities in the area of material synthesis, processing and characterization. Some more sophisticated facilities are also in a process of being set up at the institute in order to carry out material processing and characterization with an improved degree of precision, especially with regard to nanostructured material development. Keeping application in mind, the R&D facilities have been grouped as the ones meant for mechanical, physical, chemical, thermal, electrical, rheological & tribological property characterization. Other sets of facilities include those for powder processing, primary processing like melting, secondary processing such as heat treatment & deformation, and microstructural studies.

The overall objective of AMPRI is to achieve a world-class status in the area of engineering materials, component and process development. Accordingly, the HR Profile and S&T infrastructure would address to the needs of fundamental and applied research, technology development and business development in the area of materials of the future.

Product: Hybrid Composite Materials Technology

High-performance Composite (HP Composites) Materials are an alternative to synthetic wood, timber, plastic and FRP/ GRP products. The HP composites have been developed with multiple objectives on multidisciplinary subject. The density of the composites can be achieved as per the requirement with glossy finish.

The HP composite materials are comparable to natural and synthetic wood and plastic, in terms of its quality and applications and thus could be used for multifunctional applications.



The **major advantages** of HP Composites are:

- ✓ Stronger than wood and conventionally available products such as Plywood, New Wood, Medium density Fibre Board, Rice Husk Board, Particle Board, Teak Wood .
- ✓ Durable, Weather and Corrosion resistant
- ✓ Resistance to water, moisture, Termite, insects and fungus,
- ✓ Fire retardant, self-extinguishing nature
- ✓ Cost effective & maintenance free

Watch short video here

<https://www.youtube.com/watch?v=8SnnK5zmAKM>

composites

Where to use

We can use this Composite as a finished products; as a core material and as a skin element in sandwich composite structure. It is a multifunctional materials can be used as doors, falls ceilings, flooring tiles, partition wall panels, and for making furniture.

These Composites consume less energy for manufacturing and environmental friendly green materials. This composites can be used as an architectural interiors in building industry and in train, buss, ship. There are only 3 constituents/ raw materials needed for making this composites namely: Industrial waste particulates (Fly ash, bauxite waste, mineral waste, metallurgical wastes) / and fibres, polymers and are available easily.

The Technology/knowhow has been transferred to M/S Chauhan Fly ash Products Limited, Chandrapur on 11.05.2015. Ready to be transferred to other parties.

For any requests please contact:

Phone: +91 - 755 - 2457105

Fax: +91 - 755 - 2457042

email: ampriinfo@ampri.res.in

UPCOMING EVENTS

XIV International Conference of Students and Young Scientists "Prospects of Fundamental Sciences Development"

Russia, Tomsk, April 25–28, 2017

Organizing committee cordially invites students, PhD students and young scientists (up to 35 years old) to participate in the XIV International Conference of Students and Young Scientists "Prospects of Fundamental Sciences Development" to be held on April 25–28, 2017 in Tomsk, Russia. Within the framework of the Conference, the professional development program "Modern trends in the production and investigation of functional materials" is organized.

Working languages of the conference are Russian, English, German and French.

Conference proceedings will be posted on the conference website as an electronic collection and included in RSCI. Any paper accepted for presentation, which is not presented at the conference, will be excluded from the proceedings.

The best paper contest will be held in each session. A separate competition for the best report made in English will be held.

Having been reviewed, the selected papers from the conference will be published in the journal indexed by SCOPUS / Web of Science, as well as in such journals as: "Tomsk State University Journal of Biology", "Tomsk State University Journal of Chemistry", "Proceedings of Tomsk State University of Control Systems and Radioelectronics".

To participate in the conference, authors should register and submit their papers in the MS Office Word format on the conference website by March 1, 2017 (see "Call for Papers" for implementation of the requirements). The Organizing Committee is authorized to reject papers that are not relevant to the Conference or will be uploaded after submission deadline March 1, 2017.

Submit paper here: http://science-persp.tpu.ru/AppNew_en.aspx

For more information please visit http://science-persp.tpu.ru/Default_en.aspx

20th Moscow International Inventions and Innovative Technology Salon «ARCHIMEDES»

May, 16th - May, 19th 2017

Moscow, Russia, Congress-exhibition centre "Sokolniki", pavilion N4, 4.2

Salon "Archimedes" is held under the support of World Intellectual Property Organization, Administration of the President of the Russian Federation, International Federation of Inventors Associations, Moscow City Government, Chamber of Commerce and Industry of the Russian Federation, Ministry of Defense of the Russian Federation, All-Russia Society of Inventors and Innovators. The Exhibition includes:

- ✓ Inventions
- ✓ Utility models
- ✓ Designs
- ✓ Innovative projects
- ✓ Trademarks
- ✓ International scientific-practical conference on the legal protection of intellectual property results
- ✓ «International Inventor University»

Previous Salon "Archimedes" has gathered 20 different states participants in addition to 38 region participants from the Russian Federation. They have presented 750 inventions and innovative projects in 42 classes.

Every Salon's participant got through Salon "Archimedes" expert committee and international jury selection and appreciation. The best of them were awarded by golden, silver and bronze medals, special prizes.

In accordance with analytical researches Salon "Archimedes" high work efficiency is represented by means of implementation into the production sector no less than 80% of intellectual activity results, which are presented during the Salon.

Following events are planned for on-coming anniversary Salon "Archimedes-2017" to be organized and held:

- ✓ International exhibition of invention and innovative technologies;
- ✓ The International exhibition-contest of Trade Marks and names of places of goods origin "Trademark – Leader" including simultaneous demonstration of leading Russian and world trademarks products and technologies;
- ✓ The first world congress of inventors;
- ✓ Complex of training events in "Inventor's University";
- ✓ Scientific-technical creativity of the youth

festival;

- ✓ Venture trade fair;
- ✓ Inventors national delegations projects presentations;
- ✓ Business meetings and briefings between inventors, investors and industrial producers;
- ✓ Lectures and public presentations, popular-science films concerning scientific and technical achievements demonstrations,

...and many other events, which are planned to take place at the territory of Congress-exhibition, centre "Sokolniki" and associated areas.

Participation applications for the 20th Moscow International Salon of Inventions and Innovative Technologies "Archimedes-2017" **might be received up to March, 25th, 2017** by the following address:

105187, Moscow, Sherbakovskaya St., 53, block B, "InnovExpo", LLC.

E-mail: mail@archimedes.ru , mosvoir@mail.ru

For more information please visit

<http://www.archimedes.ru/inventions-salon>

The International Arctic Forum 'Arctic: Territory of Dialog'

MARCH 29–30, 2017

The 'Arctic: Territory of Dialogue' International Arctic Forum was first held in 2010 and is the largest forum for discussing topical issues and prospects for the development of the Arctic region with international partners.

The central theme of the Forum in 2017 will be 'People and the Arctic'. The Forum will bring together international organizations, government bodies, and scientific and business communities from Russia and around the world, who will work together on developing international cooperation, consolidating efforts to ensure the sustainable development of the Arctic, and raising the standard of living of those in Arctic regions.

President of the Russian Federation Vladimir Putin and Deputy Prime Minister of the Russian Federation Dmitry Rogozin will take part in the Forum.

The main events of the 'Arctic: Territory of Dialogue' 4th International Arctic Forum will be held on March 29–30, 2017 at the Lomonosov Northern (Arctic) Federal University.

Address: 17, nab. Severnoy Dviny, Arkhangelsk

For more information please visit

<http://forumarctica.ru/en/>

First International Scientific and Practical Conference on "Information Support of Science and Education: Scientometrics and Bibliometrics"

21-22 September 2017

This conference is designed to open a broad international discussion in scientometrics and bibliometrics, information technology for education, science and business; facilitating the development in the most optimal areas for international cooperation.

The main organizer of this conference: Intergovernmental organization "International Centre for Scientific and Technical Information" (ICSTI).

Official website: www.icsti.int

Supported by: UNIDO, UNESCO.

The goal of the conference is to develop basic formats of international cooperation for effective information support in science, education and business, including the means of scientometrics and bibliometrics.

The main topics for discussion:

- Modern information infrastructure: problems and prospects;
- The development of information services for science, education and business;
- Methodology and criteria for the evaluation of scientific activity.

Conference languages: English, Russian.

We invite the participation of experts in the field of scientometrics and bibliometrics, representatives of science, higher education, business and government agencies. Form of participation: personal attendance and on-line participation. A scientific book of reports and papers from the conference will be published.

Key speakers: Leading experts in infographics, bibliographics, and scientometrics from Bulgaria, Hungary, Vietnam, Egypt, India, China, Kazakhstan, Latvia, Moldova, Poland, Russia, Slovakia, Turkey, the Czech Republic, South Africa and other countries.

Venue: Kuusinen street, building 21-B, Moscow, 125252, Russian Federation

Contact: us:
Olga Andreeva, tel. +7 (910) 482 5580, Email: olga.andreeva@icsti.int
Lyubov Kalmikova, phone + 7 (499) 198 7021, Email: kalmikova@icsti.int

We invite institutions, chairs, departments, but also scholars and scientists both from Russia and India to use our e-Newsletter for sharing information about events, conferences, and courses.

We accept also the following types of information for publishing in e-Newsletter:

- 1) upcoming conferences, seminars, summer/winter schools;
- 2) grants and contests;
- 3) scholarships;
- 4) call for papers;
- 5) proposals for joint projects;
- 6) news about achievements and new research directions;
- 7) information about departments and faculties looking for partners in Russia and India;
- 8) vacancies.

Contact us: news@rusindia.ru



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Editor: Olga Ustyuzhantseva

Deadline of information acceptance: 20th of every month.

All requests please address: news@rusindia.ru