



The President **Félix TSHISEKEDI** honors congolese researchers

Conclave of the Congolese Scientific Genius
Minister Gilbert KABANDA
receives german press



Call for publication in the
Congolese Review of Sciences and Technology

ISSN (Online) : 2959-202X

ISSN (Print) 2960-2629

DOI prefix : 10.59228/rcst

www.csnrdc.net

SPECIAL EDITION
SEPT. 2023 CONCLAVE



CONTENTS

Boosting Congolese scientific genius

P3

Pre-conclave: a success for Minister Gilbert KABANDA

P4

Discovering the Conclave of Congolese Scientific Genius

P5

Closing of the Conclave of Congolese Scientific Genius: President Félix TSHISEKEDI honors Congolese researchers

P5-6

Speech by DRC President Félix TSHISEKEDI at the closing ceremony of the Conclave of Congolese Scientific Genius on August 29, 2023 in Kinshasa

P8

Speech by the Minister of Scientific Research and Technological Innovation at the closing ceremony of the Conclave of Congolese Scientific Genius held from August 19 to 29, 2023 at the Palais du peuple in Kinshasa.

P9-10

Some of the products presented at the conclave

P13-14

Minister Gilbert KABANDA receives the German press

P15



Editorial Board of the Sciences and Technological Innovations Bulletin (STIB)

Publication Director :

Christian MAZONO MPIA (NSC)

Editor in chief :

José MUSANGANA (HSRS)

General Secretary :

Jacques ASUKA MOTUNDU (NSC)

Editorial Secretary :

Jeanpi KALOMBO KANYINDA
(NCRS)

Deputy Editorial Secretary :

Nathalie NKANGA (CGI)

Central Editor :

Dany LUYINDULA (NSC)
Jean-Luc BALOGIJE SELENGE
(CRMD/BUNIA)

Eli MANUANA/GRC

Alain MBUYI MPOYI (WERC)

Nicole LUBUYA KANDA (GMRC)

Marcel MUENGULA

MAMYI (NIASR)

NDILU MALU (ATSRC)

LOTIME ANDANDA (CRLCA)

Freddy MADUKU MANZOMBA (NDRC/
GEMENA)

Yves LUHEMBWE (AFRC/LUBUMBASHI)

Théodore LUMU MBINGE (AIPS)

Paulin MANDUNGU (VAC)

MBONZI NKWEDI (HSRC/BANDUNDU)

Marketing and Advertising :

Mélanie MWAMINI ZUHULA (CEA)

Patrick NSILULU MIFUNDU (NSC)

Design and Computer Graphics :

Patrick BHAYO (NSC)

Liévin MULUMBA KAPULU (MERC)

Josaphat MENAVUVU (NSC)

MPELO KANI. STEVENS

Camera :

Jean Louis MBANDA (NCRS)

Johnny MINGANU (NSC)

Translator :

Roger MBOMA KWENGE (NSC)

Boosting Congolese scientific genius

The veil has been lifted on the image of Congolese scientific genius, which finally shines out on a platform prepared by the Conclave of Congolese Scientific Genius. The existence of this genius, materialized by all the scientific research and technological innovations at national level, is no longer a myth.

Indeed, highlighting the pragmatism of scientific research in the Democratic Republic of Congo has rarely been at the forefront of national news. The Conclave of Congolese Scientific Genius, like a spotlight, was enough to illuminate the extraordinary talents of Congolese scientific geniuses hidden throughout the country, whose achievements, long obscured by an apparent lethargy in scientific research and technological innovation, were finally highlighted and given their due.

These talents did indeed exist, as the organizers of the first Conclave of Congolese Scientific Genius were firmly convinced. All that remained was to demonstrate them and propel them forward to make a concrete and effective contribution to the country's economy and development. The gamble has paid off. All you have to do is read this special issue of the Innovations and Technologies Sciences Bulletin to discover the details.

In the manner of an Archimedean thrust, the organizers of this Conclave, on the basis of a legal framework consisting of a ministerial decree, have given impetus to the whole sector through the scientific control lever held by His Excellency



Prof. Pius MPIANA TSHIMANKINDA

the Minister of Scientific Research and Technological Innovation, Dr Gilbert Kabanda Kurhenga, under the vision of the President of the Democratic Republic of Congo, His Excellency Felix Antoine Tshisekedi Tshilombo, who personally attended these meetings. This conclave was certainly an excellent opportunity to assess the capacity of key players in the sector to take control of scientific and technological control levers, but it was also and above all an opportunity to demonstrate the capacity of Scientific Research and Technological Innovation to contribute to the country's economic growth.

In order to achieve this goal, it was essential to identify Congolese inventors and innovators in the country and in the diaspora, with research results useful for the country's development and for improving the socio-economic conditions of the Congolese people.

This was precisely the aim of the Conclave of Congolese Scientific Genius, of which this special issue of the Innovations and Technologies Sciences Bulletin presents the activities of the pre-conclave and the Conclave, spread over three weeks. The results of the evaluation of inventions and innovations, the updating of national scientific research policy documents, the proposal of priority guidelines for technological innovation policy in the Democratic Republic of the Congo, and the revision of Ordinance-Law no. 82/040 of November 05, 1982 on the organization of scientific research and technology, are among the key measures to accompany this genius to its destination.

Once propelled, this genius continues its trajectory under controlled conditions, and all those involved in this momentum remain active and mobilized to accompany this giant in its race towards the country's development. Readers of this special issue, which takes a behind-the-scenes look at the journey that began from August 19 to 29, 2023 at the Palace of the Ministry of Scientific Research and Technological Innovation, will realize that it is truly promising and full of well-founded hope.

Prof Pius MPIANA TSHIMANKINDA

President of the National Scientific Council



Pre-conclave: a success for Minister Gilbert KABANDA

The pre-conclave launched in August 2023 by the Minister of Scientific Research and Technological Innovation, Dr. Gilbert KABANDA, has seen an enthusiastic response from inventors and innovators, who have turned out every day to present their masterpieces. More than 297 innovations and inventions have already been registered, and without false modesty, most researchers agree that the head of SRTI was right to organize this event in Kinshasa. The DRC has no shortage of geniuses capable of providing answers to the potential concerns of the Congolese people.

At this stage, a number of VIPs came to see what was going on in the marquee erected at the Palais du Peuple in Linguala. He noted the presence of the President of the Senate, Professor Modeste BAHATI LUKWEMBO, the First Vice-President of the National Assembly, Professor André MBATA, Prime Minister Jean Michel

SAMA LOKONDE and the list goes on. So far, the pre-conclave has been a great success, a laudable initiative by Minister Gilbert KABANDA.

The Pre-Conclave of Congolese Scientific Genius is the event that brought together the various evaluators, appointed by ministerial decree, from HUE and SRTI: the said decree specifies the existence of four sub-commissions: scientific, administrative and financial, logistics and communication.

The scientific sub-committee was tasked with examining a number of inventions and innovations submitted by Congolese sons and daughters living in the DR Congo or abroad, according to a well-defined criterion and designed documents. Professor Pius MPIANA TSHIMANKINDA, President of the National Scientific Council, was appointed to chair the scientific commission of the Conclave.

Inventions and innovations were scrutinized over a two-week period weeks, both face-to-face and online, which meant that the examiners sometimes had to work very late. As a result, around a hundred inven-

tions and innovations were selected.

It goes without saying that the inventions and innovations not selected are not mediocre, as this is a challenge where there are winners and winners and losers. The Pre-Conclave was no exception to this to this rule of competition. All inventions and innovations are to be encouraged, because in one way or another, the creative spirit the competition.

All in all, there will be inventors and innovators whose tickets will be validated to take part in the conclave, and the other participants will be awarded a certificate of participation for having taken part in the very first Pre-Conclave of Congolese Scientific Genius organized in the DRC.

Prizes will be awarded in the following categories: gold, silver and bronze medals

BELESI Consort and Christian MAZONO/NSC

Discovering the Conclave of Congolese Scientific Genius

The Conclave of Congolese Scientific Genius (CCSG) took place from August 19 to 29, 2023 at the Palais du peuple in Kinshasa. It was opened and closed by the President of the Democratic Republic of Congo, His Excellency Félix TSHISEKEDI TSHI-LOMBO.

The main aim of this scientific activity was to identify Congolese inventors and innovators in the country and in the diaspora, with research results useful for the country's development and for improving the socio-economic conditions of the Congolese people.

The Conclave was organized by a commission charged with its preparation and organization, set up by ministerial decree. This commission was subdivided into four sub-commissions (scientific, administrative and financial, logistical, communication) under the coordination of His Excellency the Minister of Scientific Research and Technological Innovation.

The scientific sub-committee was led by the President of the National Scientific Council.

It operated in two teams: one responsible for evaluating inventions and innovations, and the other for updating the national scientific research policy document, proposing priority directions for technological innovation policy in the Democratic Republic of Congo (DRC), and revising Ordinance-Law no. 82/040 of November 05 1982 on the organization of Scientific Research and Technology.

During the pre-conclave, sixty (60) evaluators selected one hundred and twenty-seven (127) best inventions/innovations for a second evaluation session, out of a total of two hundred and ninety-seven (297) registered. A new ranking was es-

tablished after this final evaluation. In view of their ranking, the inventions/innovations selected were those that had demonstrated their strengths in solving various Congolese problems and contributing to the socio-economic development of the DRC, across the sectors of health, agri-food, digital and computer technology, energy and electrical or electronic technology, defense and security, the environment, financial revenue mobilization, etc.

The owners (winners) of the best first inventions/innovations were selected to receive a medal award. Gold medals were awarded to the first ten (10) winners, silver medals to the next fifteen (15), and bronze medals to the next twenty-five (25).

At the end of the drafters' work, several legal texts and other legal instruments relating to the scientific research and technological innovation sector were collected, enabling us to prepare the revision of Ordinance-Law n°82-040 of November 05, 1982 on the Organization of Scientific and Technical Research. The sub-committee also proposed new wording for the Law's title, the explanatory memorandum and the architecture of the draft text.



In addition, the review of the scientific research policy document highlighted the need to redefine the vision, to take into account the principles and values that will guide this updated policy, to amend the strategic axes and orientations, and to integrate priority research areas.

With regard to technological innovation policy, the sub-committee not only identified the issues and challenges at stake, but also proposed strategic orientations, notably the organization of the transfer of innovative knowledge from producers to users, support for innovative initiatives and companies, the implementation of the socio-economy of innovations, the valorization of research results and links with the entrepreneurial world, the prevention and management of conflicts surrounding innovations, the synergies of innovations with other processes, etc.

The Conclave made the following recommendations:

1. To reach 1% of Gross Domestic Product (GDP) to be allocated to Research and Development (R&D) expenditure in line with African Union (AU) recommendations,

2. Increase the budget of the Ministry of Scientific Research and Technological Innovation to at least 7% of the national budget;
3. Make the National Fund for Scientific Research and Technological Innovation (NFSRTI) operational, by setting up its bodies, coordinators and so on. and Include the NFSRTI in the State budget from fiscal year 2024, in order to support the marketing of endogenous research products on the consumer goods market;
4. Promote national scientific expertise by supporting the implementation of its research results; by integrating them into development programs in the country's various socio-economic sectors;
5. Create an interministerial commission to inject into national industry any product of national invention or innovation, scientifically developed and duly approved by the Ministry of Scientific Research and Technological Innovation;
6. Elaborate research programs in the Government's priority areas and promoting the funding of research projects in line with the priorities of these programs;
7. Promoting a culture of valorization of research results in Congolese society;
8. Creating a national intellectual property agency ;
9. Create a framework for interaction between stakeholders (government, research institutions, civil society, companies, inventors and innovators, etc.) with the aim of improving collaboration;
10. Create an order of merit in science, innovation and technology; Promote active science diplomacy through key diplomatic missions;
11. Promote active science diplomacy through key diplomatic missions;
12. Encourage public-private, public-public and private-private partnerships in Research and Technological Innovation;
13. Transform the Department for the Evaluation and Valorization of Research Results (inventions and technological innovations) into a public service under the Ministry of Scientific Research and Technological Innovation;
14. Set up a multi-disciplinary task force (economists, lawyers, etc.) to train, equip and support innovators, inventors and production units from research institutions, particularly in drawing up their business plans, with a view to optimizing their profitability;
15. Supporting innovators, inventors, researchers and entrepreneurs in the process of certifying their products, processes or services;
16. Issue an interministerial decree on the ad valorem royalty on companies using the results of research and technological innovation;
17. Stimulate public and private companies, in their research and development projects, to collaborate with research institutions in the DRC that correspond to their fields of activity;
18. Involve the Ministry of Scientific Research and Technological Innovation in the management of university and post-graduate scholarships in line with the country's priority needs;
19. Involve the Ministry of Scientific Research and Technological Innovation in the development of primary and secondary school textbooks, with a view to gearing teaching towards priority needs in the fields of Research, Innovation and Technology;
20. Promote the basic sciences (physics, mathematics, computing, engineering, chemistry, biology, etc.) in the choice of training courses for young people and in public information;
21. Strengthen financial and technical support for public and private institutions involved in scientific and technological research as part of the "one health" concept;
22. Implement digital technology for dematerializing tax procedures, starting in fiscal 2024, to optimize the collection of tax, customs and state revenues;
23. Update the ministerial decree on the share of revenues generated by research centers and institutes;
24. Improve the quality and quantity of scientific and technical personnel, with a view to increasing their efficiency, technical skills and numbers in line with international standards;
25. Promoting moral and ethical values and combating mismanagement in research;
26. Institutionalize biennial conferences on Congolese scientific engineering, with the support of the National Scientific Council and the National Fund for Scientific Research and Technological Innovation (NFSRTI);
27. To protect the inventions and/or innovations of the participants in the Conclave by publishing a register of them and facilitating their registration with the competent authorities;
28. Validate the updated National Scientific Research Policy document and the elaborated National Technological Innovation Policy document;
29. Set up a drafting committee for the bill establishing the fundamental principles of scientific research and technological innovation;
30. Set up a mechanism to monitor and implement the conclave's recommendations.

Christian MAZONO and Consort
BELESI/NSC



Photo of the President of the Republic alongside (from left to right) the Minister of SRTI, the President of the Senate, the Prime Minister and the President of the Scientific Council during the playing of the national anthem at the closing ceremony of the Conclave of Congolese Scientific Genius on August 29, 2023 in Kinshasa.

Conclusion of the Congolese scientific genius conclave

H **EAD OF STATE**
Félix TSHISEKEDI
 closed the Conclave of Congolese Scientific Genius at the Palais du peuple on August 29, 2023..

"I would like to express my joy and pride at the holding of this conclave, which has enabled the spotlight to be turned on Congolese scientific genius through the various exhibitions and other demonstrations that I and the audience had the pleasure of attending," declared the President of the Republic in his closing remarks.

In particular, the conclave recommended that 1% of Gross Domestic Product (GDP) be allocated to research and development expenditure, in line with the recommendations of the African Union (AU), and that the budget of the Ministry of Scientific Research and Technological Innovation be increased to at least 7% of the national budget, to ensure effective implementation.

It also calls for the National Fund

for Scientific Research and Technological Innovation to be made operational as early as fiscal year 2024 by setting up its bodies, and for national scientific expertise to be promoted by supporting the implementation of research findings.

"It is therefore up to parliament and the government to take the necessary measures to implement the relevant recommendations drawn up by the Conclave. The 2024 Finance Act must clearly reflect this imperative, through the budget

allocated to the Ministry of Scientific Research and Technological Innovation, which must not be less than 3% of the overall national budget," insisted the Head of State.

A total of 50 medals were awarded: 10 gold, 15 silver and 25 bronze. These prizes were awarded to the most outstanding inventions and innovations.

Christian MAZONO/NSC

Illustration photo of the presentation of participation certificates by the Head of State at the close of the conclave.



Speech by DRC President Félix TSHISEKEDI at the closing ceremony of the Conclave of Congolese Scientific Genius on August 29, 2023 in Kinshasa

First of all, I'd like to express my joy and pride at the holding of this conclave, which has highlighted Congolese scientific genius through the various exhibitions and other demonstrations that I and the audience have had the pleasure of attending.

In this respect, I would like to reiterate my warmest congratulations and thanks to all those who contributed to the success of this first edition, which will undoubtedly be followed by others.

This conclave was an excellent opportunity to assess our capacity to take control of the levers of scientific and technological economic control, and it is now up to parliament and the government to take the necessary steps without delay to implement the relevant recommendations drawn up by the conclave.

The 2024 Finance Act must clearly reflect this imperative through the budget rate allocated to the Ministry of Scientific Research and Technological Innovation, which must not be less than 3% of the overall national budget.

This percentage should be gradually increased until it reaches a level worthy of the legitimate ambitions of the Democratic Republic of Congo.

To you, dear Congolese geniuses, as well as scientific and academic members, please accept my encouragement and support in your work.

In the hope of seeing you and meeting some of your emulators during the next edition, I hereby declare the first edition of the Conclave of Congolese Scientific Genius closed.

May God bless the Democratic Republic of Congo, I thank you.



The President of the DRC FELIX TSHISEKEDI TSHI-

SPEECH BY THE MINISTER OF SCIENTIFIC RESEARCH AND TECHNOLOGICAL INNOVATION AT THE CLOSING CEREMONY OF THE CONGOLESE SCIENTIFIC GENIUS CONCLAVE HELD FROM AUGUST 19 TO 29, 2023 (PALAIS DU PEUPLE - KINSHASA)



*Your Excellency the President of the Republic, Head of State,
Honorable President of the National Assembly,
Honorable President of the Senate,
Your Excellency the Prime Minister, Head of Government,
Mr. President of the Constitutional Court,
Mr. President of the Court of Cassation,
Madam President of the State Council,
Mr. President of the Economic and Social Council,
Honorable Members of Parliament and Senators,*

Excellences, Members of the Government, Distinguished guests in your respective capacities,

The Conclave of Congolese Scientific Genius has come to life. For eleven days, the scientific cream of the Republic brilliantly fulfilled its mission: scientists, researchers, inventors and innovators had to identify and present to the Nation a new corps of patent thinkers for the construction of the State in the field of so-called "hard sciences". This is a body which, it should be remembered; the Republic was abruptly weaned off the day after its independence, 63 years ago, when all the scientists who held the scientific and technological levers of the Belgian Congo's economy withdrew. It was therefore necessary to organize their succession, following the example of the Vatican Conclave.

It's a done deal. The leading group of successors to the colonial scientific genius has just been identified. They will shortly be crowned by the Supreme Judge of the Nation, the President of the Republic.

Leading the pack, yes, for directly behind him come hundreds of other engineers, doctors, agronomists, computer scientists, biologists, chemists, physicists, geologists, mathematicians, pharmacists, etc... in short, other specialists in the hard sciences who have expressed themselves through their inventions/innovations, either through exhibitions of their work in this room or through their presentations on the Ministry's digital portal. Most of them are from the interior of the country, but many are from the diaspora.

The Minister of the SRTI Gilbert KABANDA



Your Excellency, President of the Republic,

You have personally presided over the opening and closing of this forum. The presence of Your august person, at the alpha and omega of its unfolding, confirms its character as a conclave, that is, a moment of consecration of the national scientific and technological intelligentsia in its role as legal successor to the colonial intelligentsia. From now on, I call on all the institutions of the Republic, each in its own role, to grant this legitimate successor to the colonial intelligentsia all the collaboration required, so that together we can take our socio-economic destiny into our own hands and "build a country more beautiful than before".

"Building a country more beautiful than before" Your Excellency, President of the Republic, is the solemn oath that we all proudly proclaim loud and clear in our national anthem.

The successor to the colonial intelligentsia that you are about to consecrate is naturally the spearhead of this building site. He must set to work immediately, without further delay. Its diligent implementation also requires the Government and Parliament to act swiftly to ensure that the 2024 Finance Act translates into law your clear instruction to the Government to grant budgetary appropriations to "Scientific Research and Technological Innovation", thus giving concrete form to the citizen's oath that "we will build a country more beautiful than before". This is one of the essential conditions if the Congo after 1960 is to be more beautiful than the Congo before 1960. In this way, we will also confirm the universal thesis that a nation's research budget is a major indicator of development.

Your Excellency, President of the Republic,

Honorable President of the National Assembly,

Honorable President of the Senate,

Your Excellency the Prime Minister, Head of Government,

Mr. President of the Constitutional Court,

Mr. President of the Court of Cassation,

Madam President of the State Council,

Mr. President of the Economic and Social Council,

Honorable Members of Parliament and Senators,

Excellences, Members of the Government, Distinguished Guests,

The successor to the colonial intelligentsia, whom You are enthroning today, is highlighting female achievements that stand in stark contrast to certain prejudices firmly rooted in a certain national cultural mentality according to which "mwasi atongaka mboka te". Admittedly, in the ranking of inventions and innovations, only 25% are the intellectual property of Congolese women, a far cry from the 77% of men. However, it's worth noting that women have beaten the record in one of the fields traditionally regarded as masculine, namely electromechanics, where we have the rolling robot (already in service on our roads), the hydrogen fuel cell car (in service in the USA) and the electric car in which the President of the Republic and the Prime Minister made a test run a few days ago at the exhibition site where we are.

Last but not least, a golden palm should be awarded to the innovation of "industrial cassava processing", the fruit of the ingenuity and perseverance of a Congolese mother capable of making the Democratic Republic of Congo self-sufficient in cassava-based bread flour in the very short term, before becoming the leading exporter, at least in Africa. It's fair to say that, with this Conclave, the "mwasi atongaka mboka te" taboo has collapsed like a house of cards.

Hats off to you innovative and inventive mothers!

Your Excellency, President of the Republic,

National unity, of which You are the guarantor, has emerged as a major feature of this Conclave. From all 05 continents and all our 26 provinces, we spontaneously received hundreds of innovations/inventions. The initial response to our invitation message was spontaneously and unanimously positive, whether by telephone or digital portal. All the scientists we contacted were enthusiastic. And neither in direct physical contact, nor by telephone or social networks, did we record any political reaction opposed to our Conclave project. Better still, in the debates between scientists, none of them expressed their ideas under the seal of their political party. So much so that at this point we cannot attribute the results of the Conclave to any partisan political coloration. The only party, throughout the Conclave, was the Homeland. Your non-stop visit for 04 hours straight to all the stands on display on the opening day of the Conclave was the highlight of this demonstration of national unity, the apotheosis of which will be set out by Your Auguste person in a few moments.

Your Excellency, President of the Republic, a thousand thanks on behalf of all conclavists.

Long live the Democratic Republic of Congo,

Long live the Warrior Government,

Long live Congolese Scientific Genius, I thank you.



The Conclave of Congolese Scientific Genius in pictures

Photo of the trophy reception by DRC President Félix TSHISEKEDI.



Illustrative photo of the various trophies presented to the Head of State, the Head of Government, the Minister of SRTI, the Senior Advisor to the President of the DRC at the College of Education and Research, and a number of renowned inventors/innovators





Photo illustrating the presentation of participation certificates by SRTI Minister Gilbert KABANDA



The President of the Scientific Sub-Committee and President of the NSC, Professor MPIANA TSHIMANKINDA Plus, presents the trophy to the Senior Advisor to the President of the DRC on Education, Scientific Research, Culture, Arts and Religious Affairs.



Receiving the trophy from one of the inventors

Photo of the trophy reception by SRTI Minister Gilbert KABANDA



Some of the products presented at the conclave



The FAYAR 2.0 vehicle

FAYAR 2.0 is a prototype electric car made by the Congolese themselves using local resources. Its purpose is to:

- Reduce pollution ;
- Boost Congolese entrepreneurship by creating automobile factories;
- Reduce the unemployment rate;
- Make a 100% Congolese brand.

Electric cars are vehicles powered by one or more electric motors supplied by rechargeable batteries. They are considered a cleaner alternative to petrol and diesel cars, as they produce fewer greenhouse gas emissions, thus helping to reduce air pollution and carbon emissions. Many countries around the world have encouraged the development and adoption of electric cars by offering tax incentives, setting up recharging infrastructures and setting carbon emission reduction targets. Many automotive companies, including start-ups, are also involved in the design and manufacture of electric cars, with the aim of contributing to the transition to more sustainable mobility.

In the Democratic Republic of Congo, the first electric car 100% made in the Democratic Republic of Congo called: "FAYAR 2.0" was born on July 31, 2022 by a Congolese start-up Ydago, a group of engineers and technicians working on the development of a LOW COST design for electric vehicles in Africa.

Ydago is a Congolese start-up specializing in electrical engineering, automation, industrial electronics, modular design and communication networks. Our business is the con-

struction, operation assistance and maintenance of industrial equipment.

We create customized modules to meet specific requirements, and our modules interface easily with a wide range of industrial equipment, whether or not it has a protocol (protocols used to date include One way, IIC, SPI, TOR connection interacting with industrial protocols such as RS232, Modbus, Ethernet, WIFI, USB or Bluetooth).

Discovery :

- Electricity: Intelligent management of electrical energy (automatic cut-off of lighting during the day in the event of tool use, limiting the time of use of energy-hungry household appliances by installing time-limiting relays), sizing and installation of photovoltaic panels with additional modules for autonomy management.
- Industry: Study and design of process automation modules co-managed with PLCs and APIs.

•Electronics: CAD design of all types of digital projects, whether or not using Internet communication protocols. Creation of PCBs, microcontrollers (programming language skills).

•IT: design and production of web applications, websites and the Internet of Things.

Contact for Congolese innovative genius **Audrey MAPENGO: 0817424419**

Electronic Fiscal Device (DEF)

The DEF digital solution is a computer platform, an integrated management software package with virtually unlimited professional and storage capacities, evolving in the nail. Its tasks include remote connection to the digital solution of public and private economic operators of all sizes and categories; identification of taxable persons by a unique number called the "DEF number", automatically generated by the system and constituting a tracking and tracing code for transactions carried out by the economic operator; automatic and instantaneous capture, by the digital solution, of purchase and sale operations carried out by the economic operator connected to the platform; capture, by the DEF system, of various financial information accompanying commercial transactions in the form of incoming and outgoing financial flows; calculation, by the latter, of taxes and fees affecting the captured financial flows; provision of taxable persons with intelligent, uniform accounting management software, with sector-specific and specific variants (specific analytical accounting).

Configured in accordance with revised OHADA law and compatible with the DEF platform, entering each financial flow and configuring the tax result by tax type or schedule, as well as any parafiscal taxes and royalties due, at each due date, by the economic operator connected to the platform; alternative maintenance, by the digital solution, of digitized tax accounting for each taxable person, and generation of summary work, and formation of accounting and tax results; making archived data available for selective consultation by financial authorities, economic operators themselves and authorized public establishments,

with no possibility of modification; managing, storing and processing, automatically and instantaneously, a large mass of information; and generating virtual inventories of consumer goods available in stock on national territory, as well as inventories of services exchanged between economic operators throughout the Republic.

Antiviral/Anti viral hepatitis DOUBASE C

Antitumor, a mixture of broad-spectrum molecules (prostate, liver, stomach). It is the work of **Mr. BASHENGEZI MIHIGO Constantin (0825210255)**.

Poultry feed mill

Machine capable of producing feed for livestock, fish and poultry. This machine is proposed by **Mr. ILUNGA WA-MUKINA (0974752884)**.

Robotic beds

A machine capable of producing extra oxygen in the human body. This equipment is the work of **Mr. LAY EKUAKILLE (0840191308)**.

SMK process

Optimized treatment of ores and mine rejects without prior crushing in a tank without mechanical agitation of the slurry. This manual was designed by **Madame MUMBA MULAJ and ZEKA MUJINGA (0852623954)**.

National Class Journal

It's a document that contributes to the blossoming of educational, cultural and civic values. It was invented by **Madame FALANGA MAWI CLARISSE (0822795590)**.

LOW-CARBON CEMENT (CIMAX).

Cement that is less polluting, less energy-consuming, more resistant, more durable, suitable for aggressive environments and structures (ocean bridges, roads, dams, ocean ports, etc.). This product was presented by **Mr. SEKE VANGU MAX(0815118423)**.

MUSHROOM SEED

This is a technique developed to produce seeds of any species. It is the work of **Mr. DOUX MUTSHAIL GAEL (0976378823)**.

Biochar MARIE LUCIENNE

This is a process for improving subsoil quality naturally, without the use of chemical fertilizers. This technique was developed by **Mr. MOANGO AMBELE ADRIEN (0998628096)**.

Biomodulator of filaggrins

Anti-inflammatory properties that can be used by those allergic to steroids or in substitution. This treatment was presented by **Mr. NGATU NLANDU ROGER**.

Campaign ration pack

Set of meals for a day (breakfast, lunch, dinner) for people in the countryside or in need. This food was presented by **Mrs. MALUKISA DIAWETE SIVI(0999936859)**.

OSAT electricity meter

Electricity meter with remote control of energy consumption. This device was designed by **Mr. MAMBULA ZUI-YA BERNICE (0819648854)**.

CRAA tinned food

Adding value to Congolese dishes by preserving them in metal cans. Products marketable at home and abroad. These canned foods were presented by **Mr. NKULU MWINE JULES (0997131002)**.

DrepanoAlpha anti-sickle-cell medication

DrepanoAlpha is a product based on medicinal and dietary plants designed to treat sickle-cell anemia. The drug was exhibited by **Mr. GBOLO ZOAWÉ**

Benjamin (0812676715).

ATMOSPHERIC WATER GENERATOR

This equipment produces drinking water from the humidity in the air, to alleviate the problem of water supply in peri-urban areas. This machine was submitted by **Mr. LUMPUNGU KALALA FRANKLIN (09717793914)**.

Hybrid car

Implementation of an electric car that uses electrical energy with a dual recharge from either the 220 V mains source or the 24 VDC solar system. This vehicle was designed by **Mr. MURHABAZI AKONKWA Ghislain (0995092654)**.

Smart water meter

Intelligent meter communicating via an application that lets you view water consumption online and, above all, remotely, with the option of remote shut-off. This object was proposed by **IYABA AMAMI Dieuvie (0820758037)**.

MUKOL KAPGAZ cough suppressant

This drinkable product treats dry, chronic coughs. It was invented by **Mr. KAPITA MANZANZA ANDRE**.

HELENE Oil

Oil made from rhyngophorus larvae, which has an impact on human health, as it contains very important elements (no cholesterol, rich in insulin, vitamins Ca, Mg, Ket NA). It combats food insecurity and many pathologies (diabetes, anemia, malnutrition, etc.). This fatty liquid is an innovation from **Madame Helène BAKU**.



Conclave of Congolese Scientific Genius Minister Gilbert KABANDA receives the German press

The Minister of Research and Technological Innovation, Dr. Gilbert KABANDA granted this weekend 2023 in Kinshasa an interview with the German press who wanted to know more about the on the conception, organization and results of the Conclave of Congolese Scientific Genius.

There's no doubt about it: the suc-



German Journalists

cess of the Conclave of Congolese Scientific Genius is being exported abroad.

This is a source of great pride not only for its initiator, researcher Dr Gilbert KABANDA, but also and above all for the DRC and the Congolese people.

In this way, the image of scientific research, and of science in general, created by the Congo's own children, for the consumption not only of the Congolese people but also of

the whole of humanity, is well sold. Echoes of the Conclave reverberated beyond the Congo to the farthest reaches of the world, arousing curiosity about the many and varied inventions made in Congo.

As proof of this, a group of knights of the microphone and camera from a German TV channel crossed sea and ocean to meet the Minister of Scientific Research and Technological Innovation in Kinshasa.

These German media professionals came to find out more about the conception, organization, and results of the conference, as well as post-conclave arrangements. On this occasion, Doctor Gilbert KABANDA cleared up any misunderstandings his interlocutors might have had.

Answering questions from German journalists the Patron of Scientific Research and Technological Innovation clarified the choice made for the concept of "Conclave the colonial history of Congolese genius and the post-independence DRC to this day. A history that has proved to

be deficient, decadent and outdated.

While acknowledging that they had learned a great deal from Minister KABANDA's initiatives, the German reporters wanted to know a little more about the number of researchers already listed in the DRC. In response, the Minister of Scientific Research informed them of the existence of the Digital Portal, which enables inventors and innovators from Kinshasa, the hinterland and abroad to register.

Already, many of them were knocking on the door of the Conclave. At over 300 researchers and innovators registered, but after evaluation but, after evaluation, only 126 were selected to take part.

Speaking of the results of the Conclave, Minister KABANDA emphasized that it was at this scientific event that the national budget allocated to scientific research was increased. that the national budget for scientific research was significantly increased. From now on, the kitty allocated to Scientific Research will increase by 3% according to the instructions given by the Head of State, whereas it was 0.88% to date.

Communication Unit of the Minister of SRTI



**CONGOLESE REVIEW
OF SCIENCES AND
TECHNOLOGIES**

Published by the National Scientific
Council Ministry of Scientific Research
and Technological Innovation
Democratic Republic of Congo

ISSN (Online): 2959-202X ISSN Print) :2960-2629 DOI: 10.59228 rcst
www.csnrdc.net

Our review is indexed in the following platforms:



Ordinary : 15\$
Support : 30\$
Honor : 50\$

The National Scientific Council (NSC) is the sole supervisory and decision-making body for all research centers and institutes in the DR Congo

In accordance with article 24 of Ordinance-Law n°82-040 of 5 November 1982 on the organization of scientific and technical research, the National Scientific Council is responsible for:

1. to deliberate on the guidelines and priorities of the scientific and technological research plans and programs to be carried out in the country ;
2. to deliberate on the allocation of resources from the State budget to scientific and technological activities;
3. supervising the financial management of research centers and institutes
4. approving the budgets of the Research Institutes and Centers and submitting them to the Minister for Scientific Research for approval
5. approving the organic regulations of the Research Institutes and Centers;
6. proposing to the Minister for Scientific Research the appointment and promotion of scientific and administrative personnel.

Put on line on 29 Sept. 2023

Boulevard du 30 juin, Place Royal Immeuble Kasai, 2nd Floor, Left Wing, Gombe Township

Site Web : www.csnrdc.net Email: contact@csnrdc.net N°Tél: +243 81 87 96 646; +243 89 85 32 086