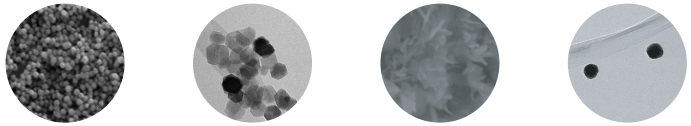
KOREA NANO OT

Company Profile

Specialist in Advanced Nanomaterial Synthesis for High-Tech Industries



#Nickel for MLCC #Ceria for CMP
#CuS for Antibacterial #Global Top-tier



Korea Nano Ot
Company Profile 2026

Nano Materials Opening the Future,

Led by Korea Nano Ot.

Korea Nano Ot opens new industrial possibilities through innovation in nanomaterial technology, creating value for the future.
Through relentless research and challenge, we develop next-generation nanomaterials and aim to be the technology partner that advances industry.

Overview

Korea Nano Ot AT A GLANCE



7+

Years of R&D

18

Patents (Registered & Filed)

4

Nano Material Lines

OVERVIEW

Korea Nano Ot

Company	•	Korea Nano Ot Co., Ltd.
CEO	•	Woo-sik Kim
Founded	•	July 2019
Location	•	44-1, Techno 10-ro, Yuseong-gu, Daejeon,
Business	•	materials for MLCC and CMP process
Investors	•	LB · SBI · KODIT · Magna · Bluepoint partners · Albatross, etc.
Employees	•	20 (incl. 2 external advisors)
Website	•	www.nano-ot.com

IP

IP PORTFOLIO

18 Patents Based on Core Proprietary Technology

9 Registered + 7 Filed + 2 PCT (KR/PCT)

18

Patents

No.	Type	Registration No.	Title
1	Registered	10-1808745	Method and Apparatus for Producing Metal Nanoparticles
2	Registered	10-2007829	Apparatus and Method for Producing Metal-Containing Nanoparticles
3	Registered	10-1918147	Plasma Water Treatment Apparatus
4	Registered	10-2007448	Method for Producing Cerium Oxide Nanoparticles
5	Registered	10-2529505	Ceria Particle Production Apparatus and Nanoparticle Production Method Using the Same
6	Registered	10-2765948	Ceria Particles for Polishing and Slurry Containing the Same
7	Registered	10-2883731	Antibacterial Material Containing Copper Sulfide, Its Production Method, and Method for Producing Copper Sulfide
8	Registered	10-2925733	Nanoparticle Production Apparatus and Nanoparticle Production Method Using the Same
9	Registered	10-2957042	Ceria Particle Production Apparatus and Ceria Particle Production Method Using the Same
10	Licensed	10-1731285	Synthesis and Fabrication of Gold Nanoparticles for Diagnostic Analysis

History

2019-2021
FOUNDED

1. Founded as MPSP (predecessor)
2. Headquarters relocated to Daejeon; corporate R&D center established
3. Certified as an Innovative Growth Venture Company
4. MSS Start-up Growth Technology Development Program
5. JDA signed with SK enpulse (Ceria)

2022-2023
R&D

1. Renamed Korea Nano Ot
2. Seed investment from Bluepoint Partners (KRW 0.3 bn)
3. JDA signed with Samsung Electro-Mechanics (Nickel for MLCC)

2024
Investment

1. Nickel precursor supply agreement with PT. BMR
2. MOU with KBSI; tenancy at KITECH
3. TIPS, Didimdol, and MOTIE supply-chain programs

2025
Global Supply Chain

1. CES · MWC · SEDEX Korea Ppuri Technology Expo
2. Supply agreement and LOI signed with Sakai Trading
3. Selected for IBK Changgong Excellence Award, 14th Entrepreneur Competition
4. Seed-bridge investment from Magna Investment (KRW 1.75 bn)
5. Chip-test volume supplied to MLCC manufacturers

2026
Commercialization

1. Expanded relocation to Tabrip-dong
2. Series A from LB Investment, SBI Investment, and Korea Credit Guarantee Fund (KRW 7.7 bn)

Facilities

Integrated R&D and Production Facility

ESTABLISHED 2019 · R&D Center 2021

NEW FACILITY 2026.03 · Tabrip-dong, Daejeon

From R&D to commercialization, we are building world-class nanomaterial technology. In March 2026, we continue that pursuit in our own new facility.

- Securing core technology through continuous R&D innovation
- Creating future growth engines through strategic new business development
- Building technological competitiveness that leads the global market

KNO develops innovative materials that shift market paradigms, through the organic integration of Research and Business.









Track Record

Customer PoC & PO Status

Ni Nickel (for MLCC)

Customer	Country	Period	Stage	Notes
Avatec	Korea	2025.07~	Joint Development	Joint MOTIE project
Dalian Huasheng	China	2025.08~	PoC Supply	Paste maker, China
CCTC	China	2025.09, 2026.02~	PoC & Product Supply	MLCC maker, China
Amotech / Amogreentech	Korea	2025.09, 2026.01, 2026.05~	PoC Supply	MLCC maker in Korea
Murata	Japan	2025.11~	PoC Supply & QO	MLCC maker globally
SEMCO	Korea	2026.01~	PoC Supply	MLCC maker globally

CeO_2 Ceria (for CMP)

Customer	Country	Period	Stage	Notes
2KGlobal	Korea	2025.10, 2025.11~	PoC Supply	
Z&T Chemical	China	2025.11~	PoC Supply	CMP material supplier, China
AGC	Japan	2025.12~	PoC Supply	20%+ global CMP share
Huawei	China	2026.1Q~	Product Development	No.1 fabless company in China
Dongjin Semichem	Korea	2026.03, 2026.04~	PoC Supply	
KCTECH	Korea	Monthly (regular)	PoC Supply	For STI and HBM

CuS Copper Sulfide (Antibacterial Material)

Customer	Country	Period	Stage	Notes
FNT	Korea	2024.08~	Product Sales	
Hongik Dancheong	Korea	2025.10~	Product Sales	
Semyung Hite	Korea	2025.10~	Product Sales	For Coway antibacterial filters

Au Gold (for Diagnostics & Skincare)

Customer	Country	Period	Stage	Notes
AMOREPACIFIC	Korea	2025.11~	PoC Supply	
K-MEDI hub	Korea	2025.11~	Product Development	CES 2026 diagnostic kit
Makecos	Korea	2025.12~	Product | Development	CES 2026 cosmetics

Record

Investment History

We Keep Growing

Growing together with partners through consistent investment



External Activities



CES 2025, Las Vegas, USA



CES 2026, Las Vegas, USA



2025, Selected for IBK Changong Daejeon



MWC 2025, Barcelona, Spain



SEDEX 2025, Seoul, Korea



Excellence Award, Entrepreneur Competition

Government R&D Projects & Support Programs

No.	Agency	Program	Item	Period	Remarks
1	MSS	Startup Growth R&D Program	CeO_2	2021.11.01.~2023.10.31.	
2	MSS	Purchase-Linked New Product R&D	CeO_2	2022.07.01.~2024.06.30.	
3	Daejeon TP	Smart Specialization Infrastructure Project	Copper Sulfide	2024.03.25.~2024.11.30.	
4	MSS	Startup Growth R&D (Didimdol)	Copper	2024.08.01.~2025.07.31	
5	MOTIE	Materials & Components R&D	Chromium Oxide	2024.08.01.~2028.12.31.	
6	MSS	TIPS	Nickel	2024.08.01.~2026.07.31.	
7	MSS	TIPS Add-on (Startup & Global Marketing)	Nickel	2024.10.01.~2025.07.31.	
8	Daejeon TP	Advanced Semiconductor R&D	Nickel	2025.04.01.~2025.11.30.	
9	Daejeon TP	Gov't Research Institute Convergence R&D	Gold	2025.06.01.~2026.05.31.	
10	Daejeon TP	Growth Ladder Program	Nickel	2025.06.01.~2025.10.31.	
11	MOTIE	Materials R&D (Cross-Technology Convergence)	Nickel	2025.07.01.~2027.12.31.	
12	Daejeon TP	Stand-alone EUV Project	CeO_2	2025.07.01.~2025.10.31.	
13	MSS	Scale-up TIPS	CeO_2 / ZrO_2	2025.08.01.~2028.07.31.	
14	KIAT	Scale-up Technology Commercialization	CeO_2	2026.04.01.~2026.12.31.	
15	K-water	Startup Leap Package	CeO_2	2026.04.01.~2027.01.31.	
16	Daejeon TP	Growth Ladder Program	CeO_2	2026.06.01.~2026.10.31.	
17	Daejeon CCEI	Startup Advancement Program	CeO_2	2026.06.01.~2026.10.31.	
18	KCNIA	Global Expansion for Nano MCE Companies	Nickel	2026.06.01.~2026.12.31.	
19	MSS	Investment-Linked R&D (DCP)	Nickel	2026.11.01.~2029.10.31.	



한국나노오트 KOREA NANO OT

Product Line



MAIN

Nickel

Core Material for Advanced Industry, Catalysts, and the MLCC Market

Driving MLCC Performance and Its Future, Nickel

With high-quality nickel nanopowder produced through ultrafine control technology,
we drive innovation in next-generation MLCC and in energy and environmental catalysis.





01 | for MLCC

Enables next-generation MLCC performance

Ultrafine · Highly uniform
Excellent sintering characteristics

※ Enables next-generation high-capacity MLCC
Cost-effective, high-efficiency material



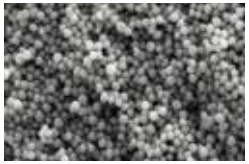
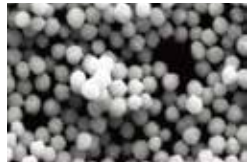
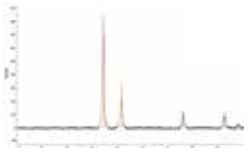
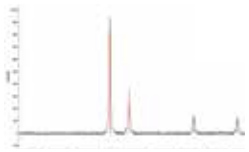
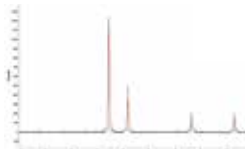
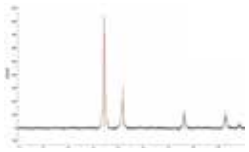
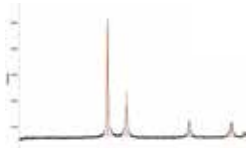
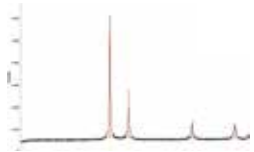
02 | Applications

Non-precious-metal catalysts for energy & environmental applications

Excellent electrochemical activity
water electrolysis & carbon reduction reactions

※ A cost-effective and efficient alternative
to precious-metal catalysts (Pt, Ir)

Ni Nickel Nanoparticles for MLCC

Size	80nm	100nm	120nm	150nm	200nm	300nm
TEM						
XRD						
C (ppm)	≤ 500	≤ 500	≤ 500	≤ 500	≤ 500	≤ 500
O (wt%)	≤ 1.0~1.5	≤ 1.0~1.5	≤ 1.0~1.5	≤ 1.0~1.5	≤ 1.0~1.5	≤ 1.0~1.5
S (ppm)	≤ 50.0	≤ 50.0	≤ 50.0	≤ 50.0	≤ 50.0	≤ 50.0
Fe (ppm)	≤ 5.00	≤ 5.00	≤ 5.00	≤ 5.00	≤ 5.00	≤ 5.00
K (ppm)	≤ 5.00	≤ 5.00	≤ 5.00	≤ 5.00	≤ 5.00	≤ 5.00
Specific surface area (m^2/g)	10~13	9~11	8~10	6~8	4~5	3~4

MAIN

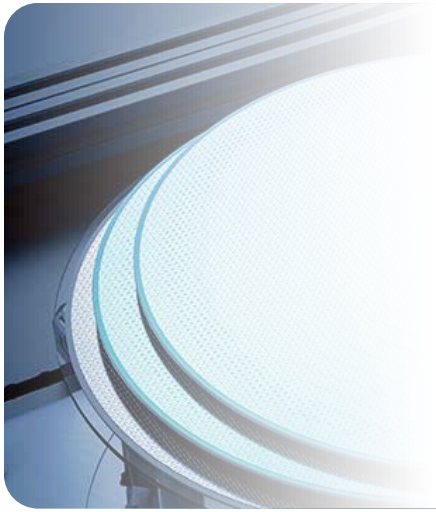
Ceria

Advanced CMP Material

Driving Next-Generation CMP and Environmental Catalysis, Ceria

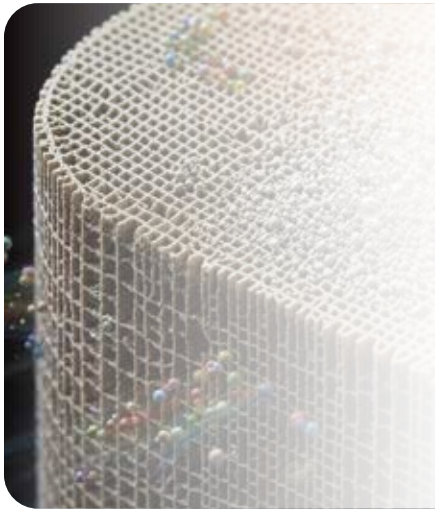
High-purity ceria nanopowder is used in CMP slurries for next-generation semiconductors and displays, and as a highly active catalyst support for energy and environmental applications.





CMP Slurry for Next-Generation Semiconductors and Displays

- High removal rate with excellent selectivity
- Minimized surface defects

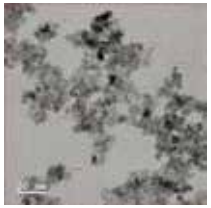
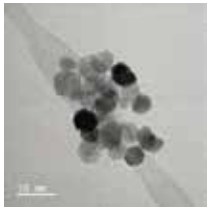
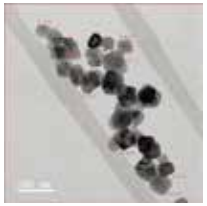
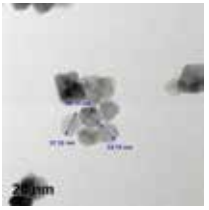
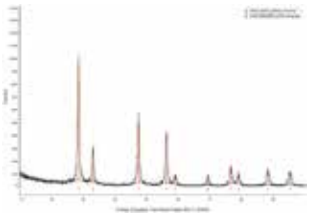
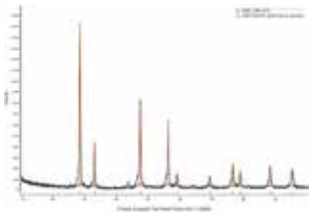
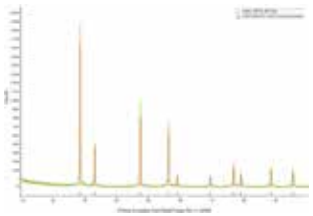
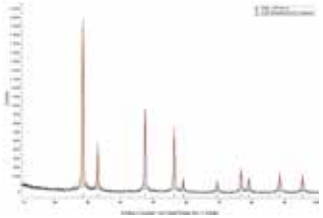
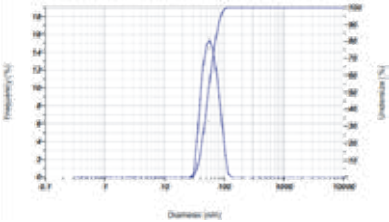
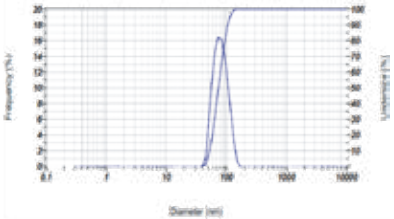
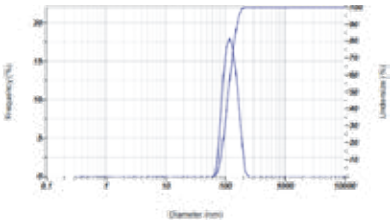


Highly Active Catalyst, Support for Energy & Environmental Use

- Effectively adsorbs and decomposes pollutants
- Efficient support for metal and oxide catalysts

CeO_2

Ceria Nanoparticles
for CMP Slurry

Size	5nm	20nm	40nm	20nm(CeO_2/ZrO_2)
TEM				
XRD				
DLS(PSA)	 Size : ≤ 60nm	 Size : ≤ 80 nm	 Size : ≤ 120 nm	Size : ≤ 70nm
BET	51.72 m^2/g	39.16 m^2/g	15~20 m^2/g	65~70 m^2/g

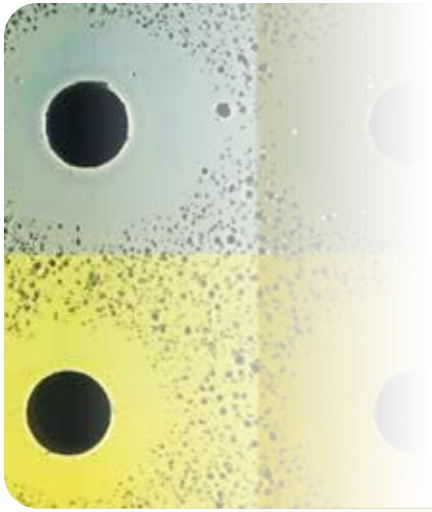
Copper Sulfide

Antibacterial Material

Combining Near-Infrared Absorption with Antibacterial Function, Copper Sulfide

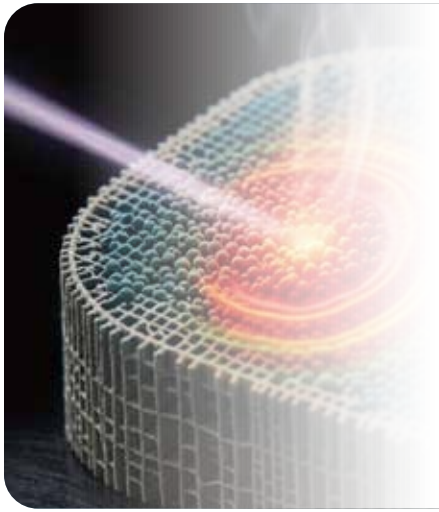
CuS nanopowder delivers antibacterial and antifungal performance together with photocatalytic function, serving as a next-generation functional material for hygiene solutions and future eco-friendly applications.





Antibacterial Solution for Fungi and Superbacteria

- 99.9% antibacterial and antifungal performance against pathogenic bacteria and fungi
- Demonstrated inactivation of superbacteria (5 strains verified)

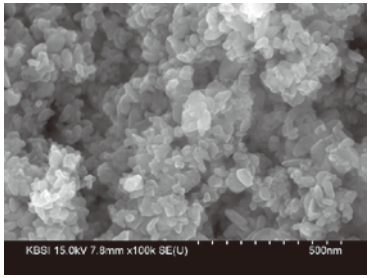
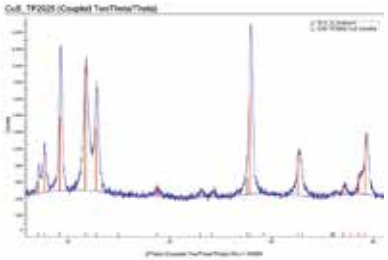
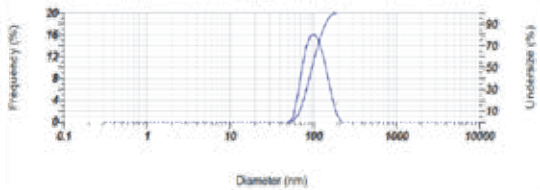


Next-Generation Photocatalytic Material for Eco-Friendly Applications

- Optimized for visible-light to near-infrared absorption
- Applicable to a range of eco-friendly technologies including air and water pollutant removal, and CO_2 conversion and reduction

CuS

Copper Sulfide Nanoparticles
for Anti-bacterial

Size	100nm
TEM	
XRD	
DLS (PSA)	 PI : 0.3
pH	4~5

Test Reports by Product



CuS Applied Paint

Antibacterial Test



Antifungal Test





CuS Applied Plastic

Antibacterial Test





CuS Applied Film(PE)

Antibacterial Test





CuS Applied Solution

Antibacterial Test



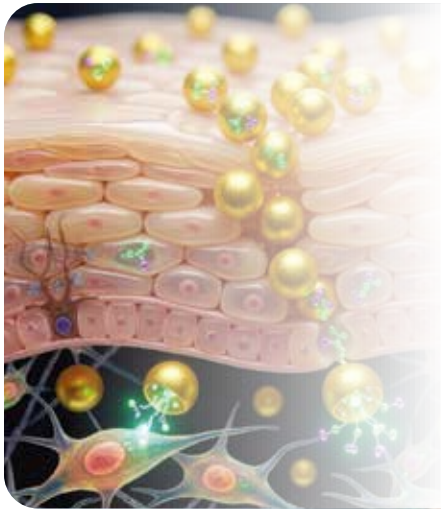
Gold

Advanced Bio & Skincare Materials

For Drug Delivery & Photothermal Applications, Gold-Bio

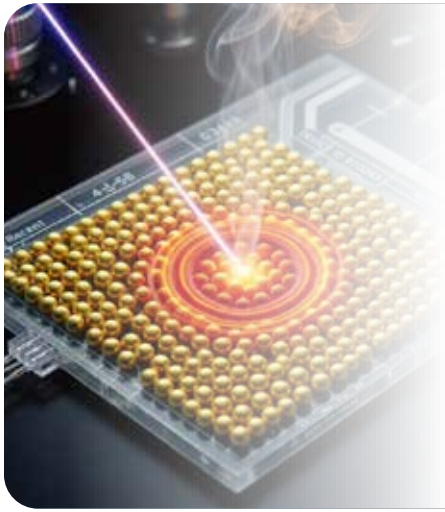
Our gold nanoparticle technology enables advanced materials for biomedical and skincare applications. Excellent biocompatibility and LSPR-based photothermal conversion properties support a wide range of high-value applications.





Drug Delivery & Biocompatibility

- Biocompatibility & surface functionalization maximize efficacy
- Precise size control enhances absorption
- Key material for efficient biomedical drug delivery

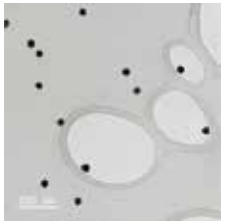
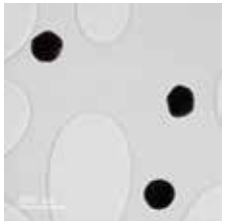
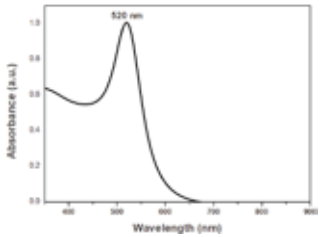
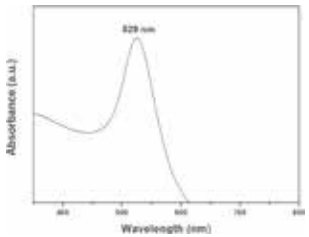
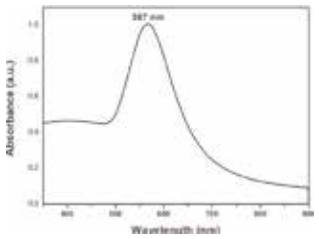
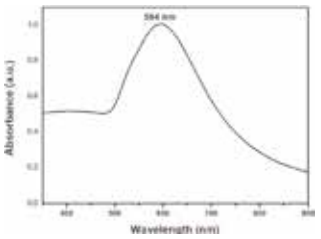
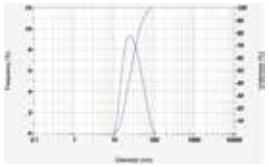
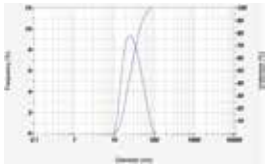
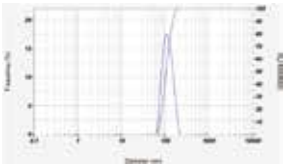
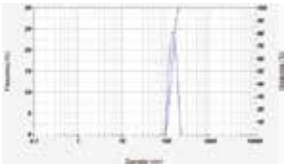


LSPR-Based Photothermal Properties (PTT)

- High-performance LSPR photothermal conversion
- High-value applications in aesthetic treatments & precision diagnostic kits
- Premium nanomaterials optimized for next-gen skincare & diagnostics

Au

Gold Nanoparticles
for Bio & Skincare

Size	20nm	50nm	100nm	130nm
TEM				
UV-Vis				
DLS(PSA)	 Size : 20 nm ± 3nm **PI : ≤ 0.1**	 Size : 50 nm ± 3nm **PI : ≤ 0.1**	 Size : 100 nm ± 3nm **PI : ≤ 0.1**	 Size : 130 nm ± 3nm **PI : ≤ 0.1**
Purity	99.9%	99.9%	99.9%	99.9%

Nano-innovation accelerating the *Future*

KOREA NANO OT KNO



Korea Nano Ot Co., Ltd. | www.nano-ot.com
44-1, Techno 10-ro, Yuseong-gu, Daejeon, Republic of Korea
+82 042 822 9271

Patents

Patents













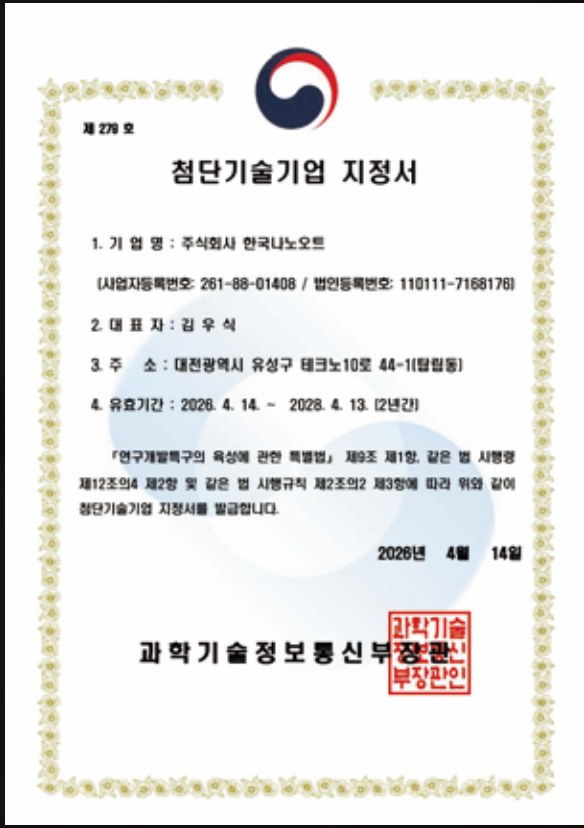






Certificates

Certificates



제 279 호

첨단기술기업 지정서

1. 기 업 명 : 주식회사 한국나노오트

(사업자등록번호: 261-88-01408 / 법인등록번호: 110111-7168176)

2. 대 표 자 : 김 우 식

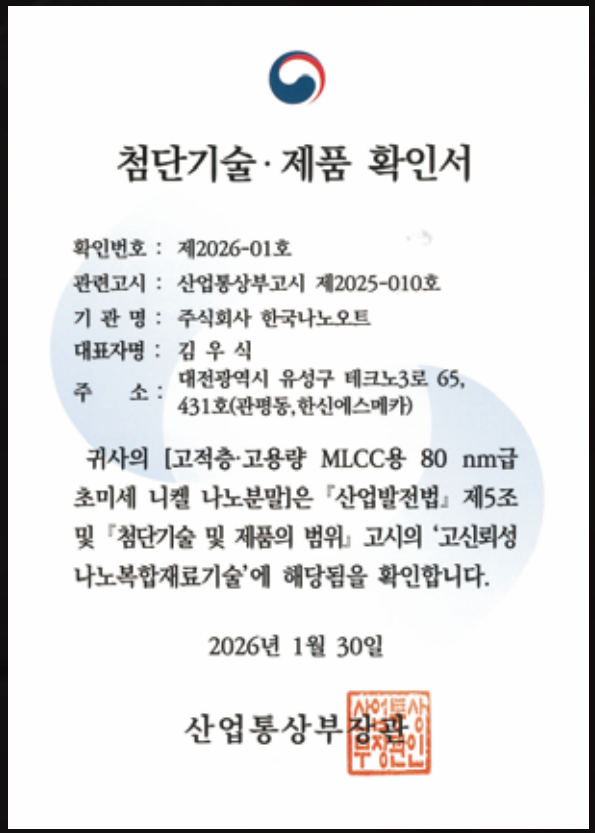
3. 주 소 : 대전광역시 유성구 테크노10로 44-1(탑립동)

4. 유효기간 : 2026. 4. 14. ~ 2028. 4. 13. (2년간)

「연구개발특구의 육성에 관한 특별법」 제9조 제1항, 같은 법 시행령 제12조의4 제2항 및 같은 법 시행규칙 제2조의2 제3항에 따라 위와 같이 첨단기술기업 지정서를 발급합니다.

2026년 4월 14일

과학기술정보통신부장관



첨단기술·제품 확인서

확인번호 : 제2026-01호
관련고시 : 산업통상부고시 제2025-010호
기 관 명 : 주식회사 한국나노오트
대표자명 : 김 우 식
주 소 : 대전광역시 유성구 테크노3로 65, 431호(관평동,한신에스메카)

귀사의 [고적층·고용량 MLCC용 80 nm급 초미세 니켈 나노분말]은 『산업발전법』 제5조 및 『첨단기술 및 제품의 범위』 고시의 '고신뢰성 나노복합재료기술'에 해당됨을 확인합니다.

2026년 1월 30일

산업통상부장관



벤처기업확인서

CERTIFICATE OF VENTURE ENTERPRISE

- 기업명 주식회사 한국나노오트
- 사업자등록번호 261-88-01408
- 대표자 김우식
- 주소 대전광역시 유성구 테크노10로 44-1 (탑립동)
- 확인유형 혁신성장유형
- 유효기간 2024년 10월 06일 ~ 2027년 10월 05일

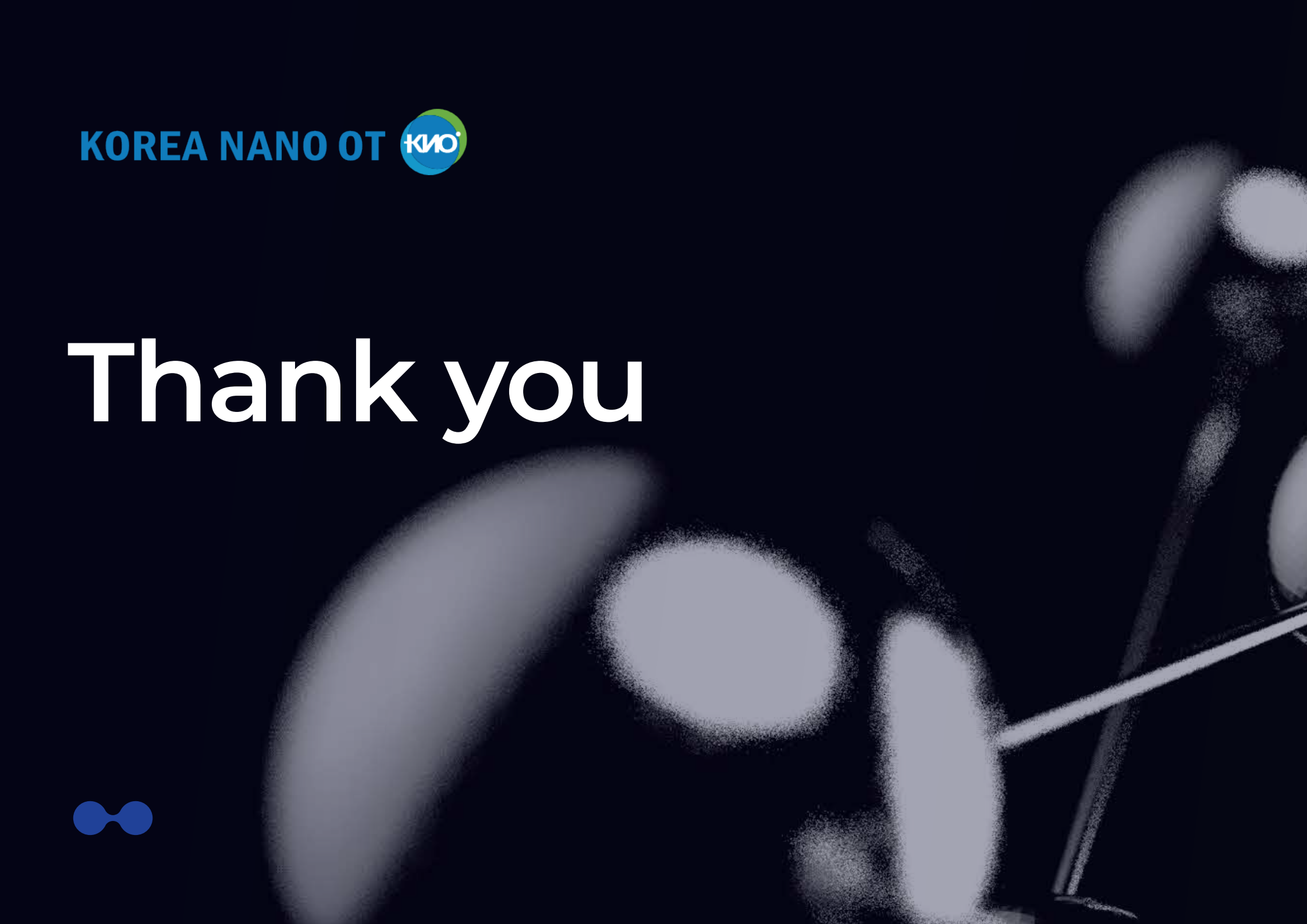
위 기업은 「벤처기업육성에 관한 특별법」 제25조의 규정에 의거 벤처기업임을 확인합니다.

2024년 10월 22일

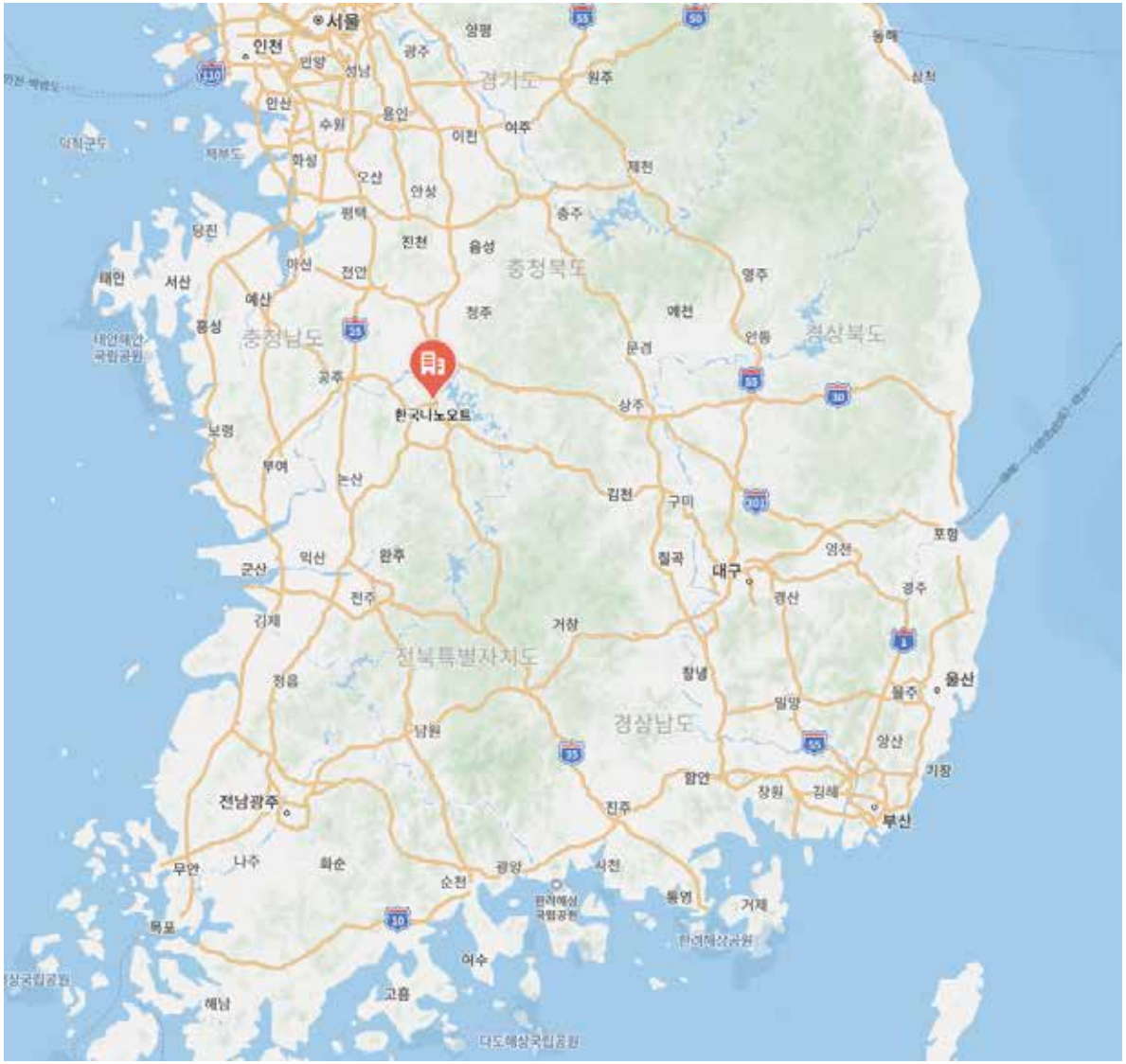
벤처기업확인기관장

KOREA NANO OT

Thank you









Specialist in Advanced Nanomaterial Synthesis for High-Tech Industries

44-1, Techno 10-ro, Yuseong-gu, Daejeon, Republic of Korea

+82 42-822-9271

mpsp@nano-ot.com

www.nano-ot.com