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SHANGHAI XINBODI MATERIALS RESEARCH CO., LTD



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PRECISION IN TECHNOLOGY,
INNOVATION FOR THE LONG TERM.

**THE MATERIAL RESEARCH AND DEVELOPMENT
OUTSOURCING AGENCY BY YOUR SIDE**

Company Profile



Shanghai Xinbodi Materials Research Co., Ltd

[(Abbreviated as Xinbodi)]

As China's first provider to propose and implement the Material Contract Research Organization (CRO) model, Xinbodi specializes in chemical materials innovation. We break traditional R&D barriers through "technology-enabled solutions and end-to-end services". Focusing on the core needs of domestic and international chemical enterprises, we provide one-stop solutions spanning from patent protection to quality control and market competitiveness. We have served over 20,000 leading industry enterprises, covering 12 major sectors including polymer materials, fine chemicals, new construction materials, semiconductors, and more.

The company has received numerous honors and certifications, including National High-Tech Enterprise, Specialized, Refined, Unique, and New (SRUN) Enterprise, Enterprise Technology Center, and is recognized as a leading innovative enterprise. ◦



新白地

ABOUT US

Comprehensive technical solutions

Shanghai Xinbodi Materials Research Co., Ltd

 **200w+**
Chromatograms &
Mass Spectra Library

 **100+**
Precision Analysis
Instruments

 **10,000+**
Served Clients
(Including World's &
China's Top 500 Companies)

 **4000m²+**
Brand-new Testing &
Analysis Laboratory

Corporate Culture

* Customer First Dedication & Reflection Teamwork
Purpose-Driven Belief-Oriented
Execution Responsibility Communication Gratitude Tenacity



CULTURE

Corporate Vision



Be willing to be a supporting role
To Build an Exceptional Science Powered
Service Company

Corporate Mission



Achieve Success by Empowering Others
Help Clients Build Core Competitiveness

Core Values



"Customer First, Dedication & Reflection, Teamwork, Purpose-Driven, Belief-Oriented, Execution, Responsibility, Communication, Gratitude, Tenacity."— these principles crystallize our corporate ethos and guide every employee's conduct.

As a first-class brand, the enterprise provides excellent service to client enterprises through its professionalism and individualized approach. This not only builds a strong reputation among employees but also guides their behavior, forming the core competitiveness of the company.

Corporate Trajectory

Innovation-Driven, Steadfast Growth Path

Rooted in the Frontline 2016

The team immersed themselves in the production lines of over ten industries, including rubber and plastics, systematically gathering users' core pain points to anchor R&D direction.

Meteoric Rise 2018

After three years of deep industry expertise, we launched highly market-adapted technical solutions, achieving explosive business growth.

Strategic Acquisition 2020

Completed the acquisition of Feiyan Testing, a subsidiary of a listed company, significantly enhancing service capabilities and market coverage in the testing field.

Authoritative Accreditations 2022

Awarded dual government recognitions: Shanghai "High-Tech Enterprise" and "Baoshan District Enterprise Technology Center."

New Chapter of Glory 2024

Honored as an "Innovative SME" and "University Student Innovation Internship Base"; Ranked among Shanghai's TOP 50 (45th) in the Brand Value List for Producer Services; Officially inaugurated headquarters building, ushering in a new era of scaled development.

2015 Setting Sail

Shanghai Xinbodi Engineering Technology Co., Ltd. was officially established in Baoshan District, Shanghai, primarily engaged in fracture testing and technology development services since its inception.

2017 Tempering Technology

Developed R&D methodologies based on user feedback and optimized the service system, laying the foundation for leadership in the field.

2019 Capital Empowerment

Acquired material and data resources through a subsidiary platform, enabling deeper resource insights.

2021 Expansion of the layout

Acquired Jiangsu Kaike shares and established a Suzhou branch, deepening the technical service network layout in the Yangtze River Delta region.

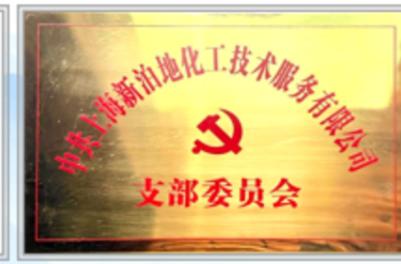
2023 Leading with Specialization

Awarded Shanghai's "Specialized, Refined, Unique, and New" (SRUN) SME designation, and won the Gold Prize in the "Innovate in Shanghai" International Innovation and Entrepreneurship Competition.

2025 Exploring New Frontiers

Strategically entering the aerospace economy sector, deploying technical services for emerging fields, and injecting new growth momentum.

Honors And Qualifications

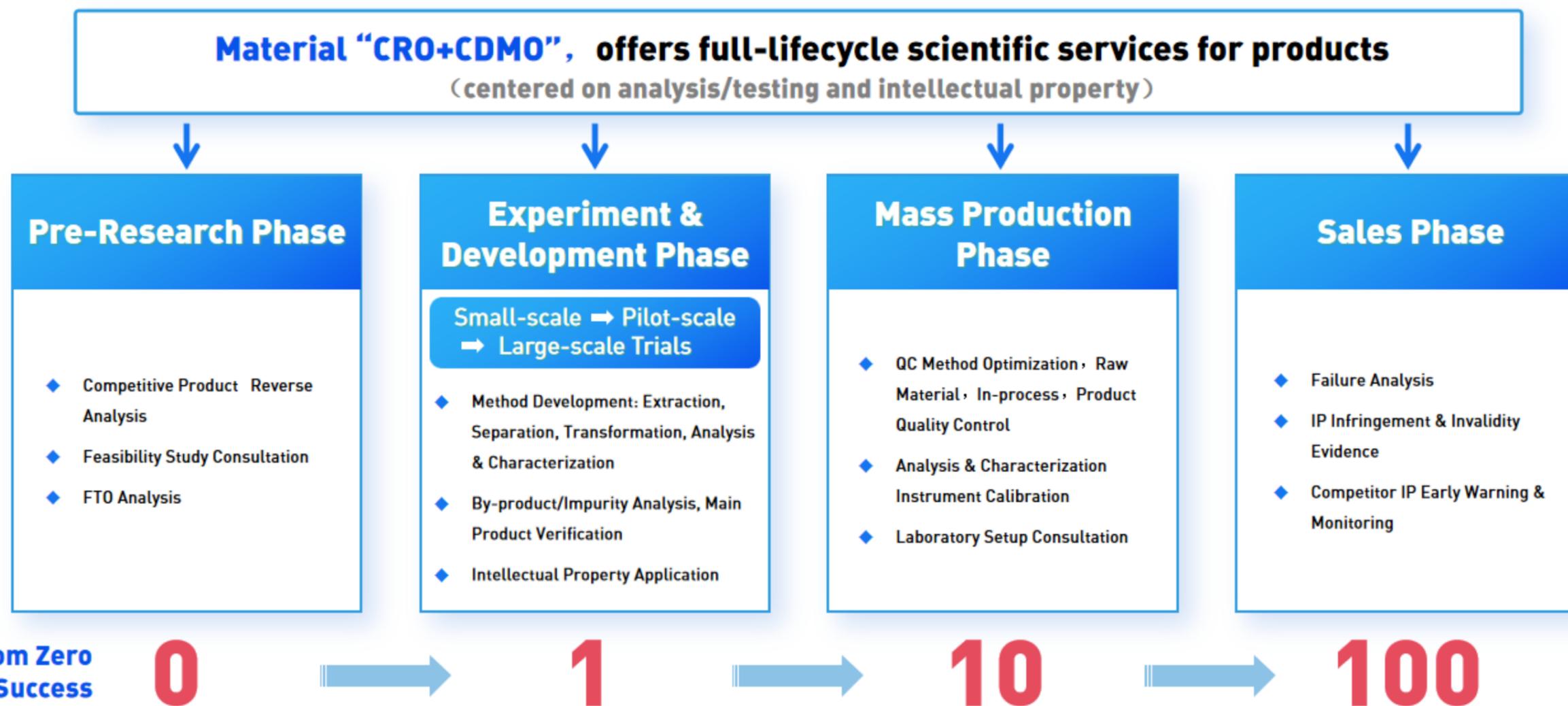


Scope of Services

Material CRO Services ◦ services provide enterprises with a comprehensive technology support solution, spanning the entire lifecycle from initial research to final product sales.

During the research phase, we conduct product feasibility assessments, draft project proposals, and perform competitive product analysis to establish a solid foundation before R&D commences.

These services deliver one-stop scientific support, enabling optimized R&D and production costs while enhancing core competitiveness for sustained market leadership.



*Intellectual property services are exclusively managed by affiliated agencies:
Shanghai Xinboli Intellectual Property Agency (General Partnership)
Suzhou Subodi Intellectual Property Agency (General Partnership).*

Solutions for Each Phase

Pre-Research Phase



Competitive Product Reverse Analysis

Through reverse engineering, we determine the formulation system, required raw materials, production equipment, manufacturing costs, compliance requirements (environmental approvals, registrations, etc.), and basic technical personnel requirements of target products.



Feasibility Report

Determines project viability through technical competitor analysis, internal capability assessment, market requirements, and ROI evaluation.

Experimental Phase

A

Separation, Purification and Method Development

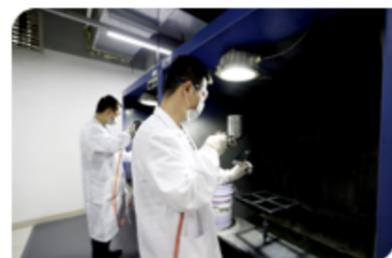
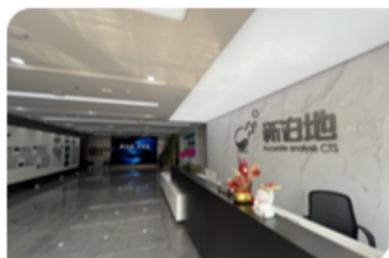
Separation, purification and characterization methods development for various plant extracts and pharmaceutical intermediates.

B

Impurity/By-product Analysis, Main Product Verification

Impurity/by-product analysis and main product verification: Focused on synthetic materials, deeply analyzing post-synthesis product structures and component ratios to provide theoretical support for subsequent process adjustments and purification methods.

When building an internal quality control system and standards, accurately refine the core performance indicators of the target product to ensure close alignment with upstream/downstream application needs. Adopt a flexible "one-case, one-discussion" customized QC strategy based on actual market scenarios. First-class enterprises recognize the importance of "standards first". They initiate standard construction at the launch of new products to seize market opportunities and dominate industry discourse. The "first-mover advantage" phenomenon noted by economists is particularly prominent in standards competition across international, national, industry, regional, and enterprise levels – though the highest standards often originate internally. Standard-setting reflects strategic vision and must progress step by step with corporate development. Enterprises should start with internal standards as the foundation, advancing steadily while accelerating standard-building in sync with business expansion.



Mass Production Phase

Raw Material Quality Control



Corporate standards emphasize raw material stability. Without stable suppliers, product consistency is hard to ensure. Suppliers' quality reports often lack key parameters (moisture, color, impurities). Select key control parameters based on product characteristics, and simplify non-critical inspections to efficiently guarantee quality.

Process Quality Control



Process QC is critical – the cornerstone of final product quality. Ignoring process control until post-production inspection is often too late. Deeply understand the reaction system, identify/key monitor core parameters in critical steps, and develop scientific control plans to effectively reduce defect rates and improve overall quality.

Product Quality Control



Fully consider downstream application needs to develop simple yet efficient QC methods. Avoid blindly pursuing high-end equipment; focus on effectiveness without creating unnecessary costs. Precisely locate QC points and adopt cost-effective detection methods to control expenses and improve operational efficiency.

Product Case



Example: For triethanolamine moisture control, purchasing a professional Karl Fischer moisture tester is unnecessary. Low-cost alternatives cannot distinguish water/alcohol, while high-end models are excessive. Simply take 10ml, dry at 90°C for 4 hours, and measure residual moisture. QC plans must emphasize simplicity, efficiency, and necessity.



Sales Stage

Failure Analysis

When handling inevitable industrial failures during product application, prioritize root cause analysis and responsibility attribution to prevent undue corporate liability, ensuring sustained market sales and reputation.

Instrument and Equipment

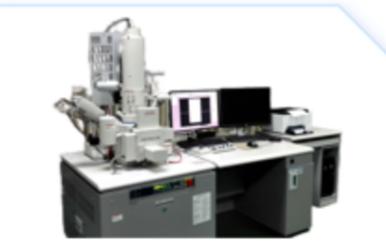
Chromatograph

			
Liquid - phase combination	Gas chromatograph - mass spectrometer (thermal desorption)	Ion chromatograph	High - temperature gel permeation chromatograph GPC

Mass Spectrometer

			
Glow discharge mass spectrometer	Secondary ion mass spectrometry	Elemental analysis isotope mass spectrometry combined instrument	Elemental analysis isotope mass spectrometry combined instrument

Energy Dispersive Spectrometer

		
Scanning electron microscope - energy dispersive combined instrument	X - ray photoelectron spectrometer	Auger electron spectrometer

Spectrometer

			
Vibrational circular dichroism spectrometer	Inductively coupled plasma emission spectrometer (new)	Ultraviolet - visible - near - infrared spectrophotometer	Wavelength - dispersive X - ray fluorescence spectrometer (XRF)



Core Advantages

200w⁺ database

Accumulated Massive Vertical-Specific Client Datasets

67% Repeat Client Ratio

Customer satisfaction is the core indicator

13yr⁺ working experience of core backbones

Full Lifecycle Coverage: From Product Development to Post-Sales Support

24h Post-sales service

We set up an engineer Q&A group that delivers Quick response of 15 minutes + fault location within 4 hours + 24 - hour closed - loop solution mechanism



Typical Case

Case 1: Failure Analysis - Manual Turning Yellow

I. Project Background:

Problem Description:

The sample is a charger manual.

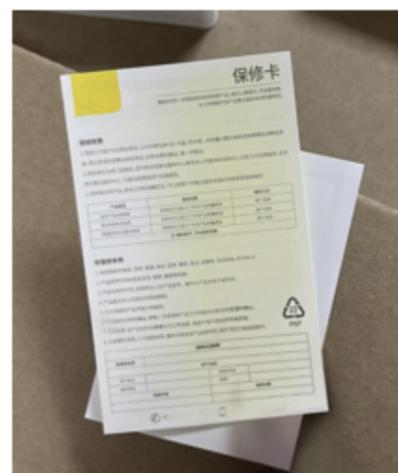
The client reported that the manual inside the charger box turns yellow near the charging cable area, and turns white after sunlight exposure.

Customer Requirements:

- a) Analyze composition of OK sample and NG sample;
- b) Determine root cause of yellowing.



Standard sample



Yellowed sample

II. Analysis Results:

- a) Solvent extraction tests revealed trace amounts of **quinoid compounds** (Cc1c(C)c2c(c1)C(=O)OC2) in the NG manual extract. Quinoid structures typically exhibit yellow/red dark hues.
- b) Composition comparison between NG and OK cable materials (Table 2) shows identical components except for antioxidants.

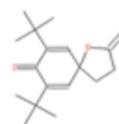


Table 2. NG vs OK Cable Material Composition

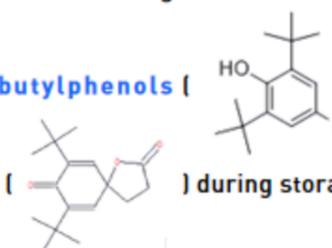
Serial Number	Chemical name	Content in NG parts(%)	Content in OK parts(%)	CAS number / Common name
1	Styrene - ethylene - butylene - styrene block copolymer	~31-32	~30-31	SEBS
2	Polypropylene	~4-5	~5-6	PP
3	Polyphenyl ether	~25-26	~15-16	PPO
4	Melamine cyanurate	~21-22	~28-29	MCA
5	Diethyl phosphinate aluminum	~3-4	~4-5	ADP
6	Paraffin oil	~13-14	~16-17	/
7	Tetrakis[β-(3,5 - di - tert - butyl - 4 - hydroxyphenyl)propionate] pentaerythritol ester	N.D.	~0.1-0.2	Antioxidant 1010
8	Octadecanol - 3 - (3,5 - di - tert - butyl - 4 - hydroxyphenyl)propionate	~0.1-0.2	N.D.	Antioxidant 1076
9	Tris(2,4 - di - tert - butylphenyl) phosphite	~0.05-0.10	0.05-0.10	Antioxidant 168
10	Erucamide	N.D.	~0.3-0.4	/
11	Polysiloxane	~0.6-0.7	~0.4-0.5	Silicone

III. Core Summary

In summary, the failure mechanism is migration of antioxidant small molecules from cables to the

manual. Specifically, **tert-butylphenols** (Cc1c(C)c(C)cc1) in Antioxidant 1076 (NG sample) form **darkquinoid compounds** (Cc1c(C)c2c(c1)C(=O)OC2) during storage (e.g. in high-temperature environments),

causing yellowing. Upon UV/heat exposure (e.g. sunlight), these quinoid structures degrade into light-colored phenolic compounds with smaller molecular weights, explaining the post-exposure whitening phenomenon.



Case 2 Material Failure Analysis

I. Customer Requirements:

Cracks and fractures occurred during the use of Porsche interior buttons. The client needs to check whether it is man-made damage.



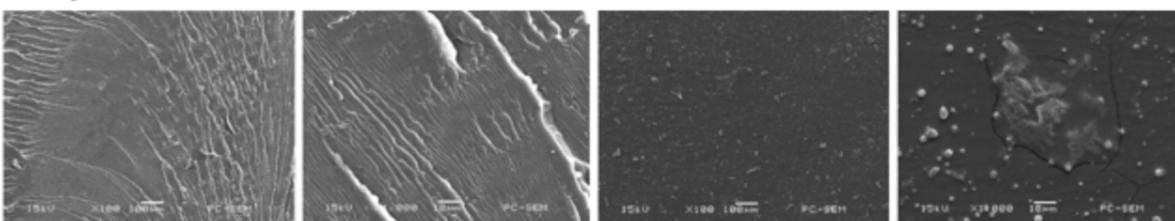
Cracked sample

Fractured sample

Intact sample

II. Fracture Surface Analysis:

Comparison between simulated artificial fracture surface and failed part concludes non-man-made damage.



Cracked sample

Fractured sample

Cracked sample

Fractured sample

III. Further Plan:

Identify the root cause of cracking.

1. Material Problem

Material comparison between OK and NG samples
No significant difference in composition (PC part)

3. Find the Target Substance

Residue extraction experiment
Surfactant residue
Surfactants commonly found in cleaner products

5. Reproduce Experimental Phenomena

Soak with cleaning agent (mixed system)
Soak with pure substance

2. Determine the Suspicion Direction

PC material has notch sensitivity
PC material prone to stress residue
PC material has poor solvent resistance (esp. aromatics, halohydrocarbons)

4. Check Consistency

Collect commonly seen cleaner products
Composition analysis of cleaners
Check for target substances

Industry Covered



Xinbodi's services achieve full coverage across industries and supply chains. Providing comprehensive technical support in plastics, metalworking fluids, rubber, cleaners, adhesives, pesticides/veterinary drugs, inks, textile chemicals, oil products, papermaking additives, coatings, food additives, cosmetics, surface treatment agents, leather auxiliaries, and sectors including chemical, medical, agrochemical, textile, metal, construction, and daily chemicals.

Xinbodi's remains at the technological forefront, committed to delivering cutting-edge services. We actively expand into high-tech fields like **electronic chemicals, semiconductors, new energy, lithium batteries, aviation materials, and photovoltaic materials, continuously innovating** to provide superior value and experiences.



Well-known Enterprise & University Cooperation

Well-known Enterprises

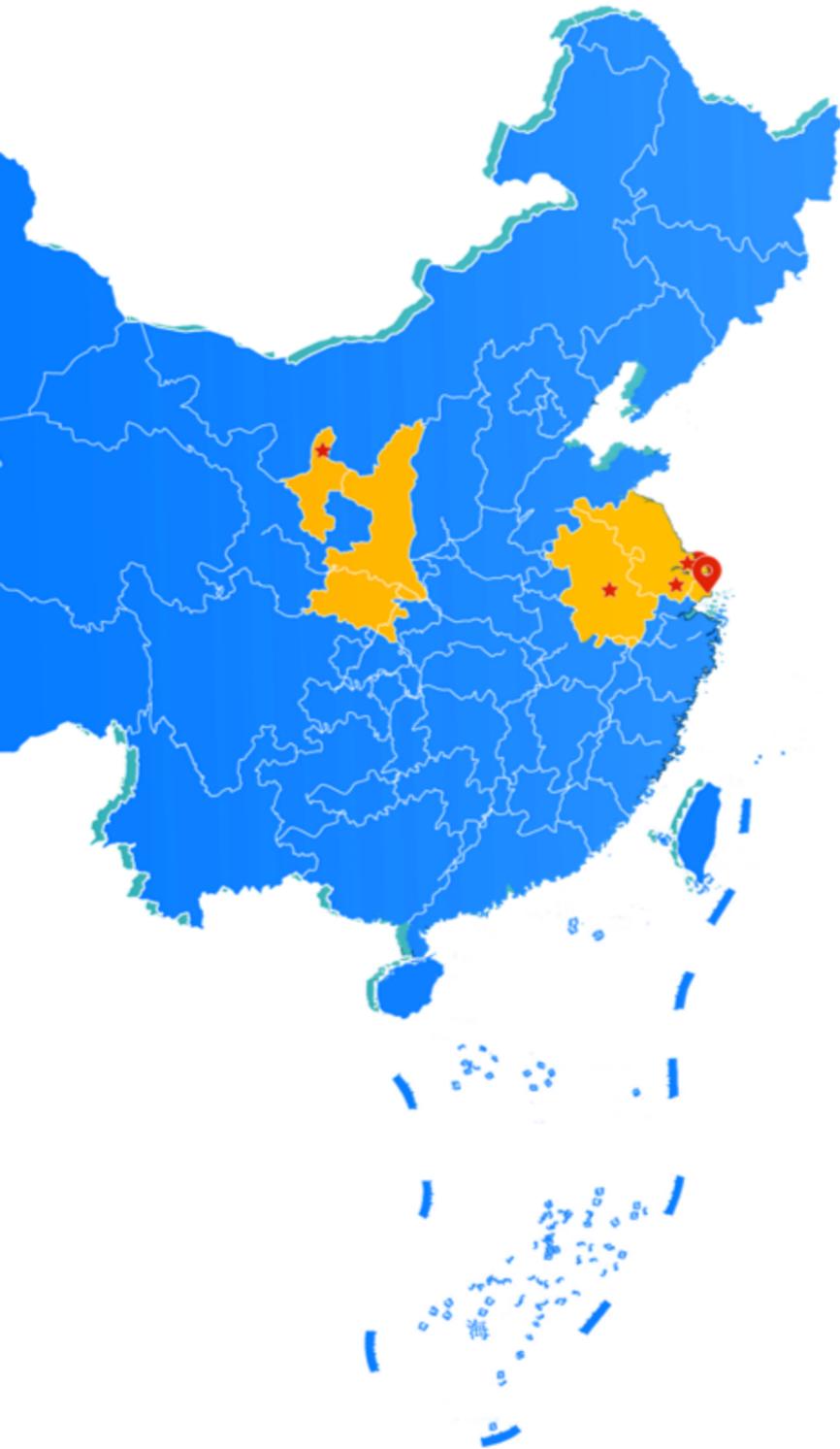


Project 985 Universities

Among 39 domestic 985 universities, Xinbodi has established collaborations with 28 institutions for scientific research. These universities highly recognize Xinbodi's technical capabilities. Xinbodi will continue steadfastly to provide more technical support for scientific research institutions.



Business Layout



Shanghai Headquarters 📍

Branch Offices ★

Own Resources

6 Cities

Since establishment, we have steadily expanded from our Shanghai HQ core. Branches in Suzhou, Nanjing, Nantong, Hefei, Yinchuan effectively cover East/Central/Northwest China. Simultaneously, we accelerate domestic/global expansion per strategic plans, seeking new growth points to deliver comprehensive and efficient services.

One-stop Inspection Delivery

**Nationwide service
with one call**



Overseas branches (e.g. Thailand, Malaysia) in Belt & Road countries are being established....