Curriculum Vitae

Candidate: MM

September 18, 2026

Career History

Consulting: January 2026 - present

Currently provides consulting to several companies on the synthesis of polyimide materials and their application to electronic materials. Gives guidance on monomer design and polymerization technology not only for polyimides but also for thermoplastic and thermosetting resins.

Main product examples include liquid crystal alignment agents using polyimide, general-purpose polyimide, electrophotographic seamless belts, LIB (lithium-ion battery) negative electrode binders, magnet wire, low-dielectric coating materials, LIB coated separators using conductive polymers, electrolyte additives, LIB negative electrode binders using acrylic resin, and CFRTP using PP and nylon. Guidance and training are provided drawing on this experience.

Plans to be involved in building the overall framework going forward, including infrastructure systems such as production and quality control of electronic materials.

In addition to direct materials development, also provides guidance, from the perspective of a Professional Engineer, Japan (Engineering Management), on project management, scientific thinking, extracting/structuring inventions from patent technology, drafting patent specifications, and office action responses (intermediate processing).

Hisho Japan Co., Ltd.: March 2024 - January 2026

Advanced a project to develop polymer materials for electrophotographic components made of aromatic polyimide. Guided the Chinese site in developing and manufacturing seamless belts, such as transfer belt and fixing belt components that are essential to electrophotographic equipment, and guided equipment specification design. The work was suspended when the candidate left the company, and resumed this July under a changed contract form.

Also currently advancing a project on water-soluble polyimide for lithium-ion battery negative electrode binders and a coated separator using soluble polyimide.

Chukagaku Japan Research Institute Co., Ltd.: November 2022 - February 2024

Served as project manager for a polymer materials project for electronic materials, responsible for project planning and execution. Prepared a broad overall plan spanning R&D, facility design, equipment introduction and staff recruitment. After aligning the final plan with the headquarters decision-making department, moved the project into the execution phase. On leaving, to hand over the project, completed the training of the persons in charge and the preparation of the development infrastructure.

Also performed management tasks for the start-up of the Yokohama laboratory, including equipment introduction and setup, infrastructure construction, design of the personnel system, and design of the safety management system.

Osaka Soda Co., Ltd.: September 2018 - October 2022

From planning of polyimide development themes, carried out materials development and formulation of the business plan. Subsequently appointed leader of the battery materials development group, driving the development framework, materials design, organization of the evaluation and analysis team, and formulation of business strategy.

(1) R&D of polyimide materials

- Promoted the design and development of polyimide materials with the low dielectric constant / low dielectric loss tangent performance required for fifth-generation (5G) communication systems. Secured prospects for a material with top-level dielectric performance and processability among polyimide materials, and customer proposals are in progress.

(2) Development of lithium-ion battery materials

- Promoted the design of polyacrylic resin for lithium-ion battery negative electrode binders and proposal activities to customers. The material was developed by designing from parameters translated from customer requirements into intermediate properties; the novelty of its functional mechanism attracted the interest of many customers, and it was adopted by Company T.
- Developed water-soluble polyimide as a next-generation negative electrode binder. When installed in lithium-ion batteries, capacity loss accompanying charge and discharge was smaller than with conventional SBR and acrylic resin, extending the life of the battery device.
- Applied for and was selected for the Green Innovation Fund Project under NEDO in fiscal 2022. For the application, advanced project formation within the company and, as project leader, carried out planning and management of technology strategy, organization and plans.
- Led the research infrastructure improvement project, including a newly developed building, carrying it out from planning to implementation.

(3) Other: proposing and setting new materials development themes

- Proposed and set development themes in cosmetic materials and optical materials, which are fields of different industries, utilizing the company's proprietary technology. Currently coaching team members.

Fuji Xerox Co., Ltd.: January 2003 - June 2018

Set up a development team for polyimide materials used in electrophotography and introduced the products. Subsequently moved to the new business development division, in charge of technology development and business development activities. Built a technology-appeal story, surveyed and selected matching customers, and launched new business activities.

(1) R&D of polyimide materials

- Carried out optimal materials design and mass production (in-house manufacturing) of polyimide materials used in fixing belts/transfer belts (electrophotographic engine components), achieving annual cost improvement of 0.3 billion yen and building a foundation technology system.
- Built the design of manufacturing infrastructure for resins for electronic materials: a manufacturing environment consisting of a clean environment, reaction equipment that suppresses contamination, post-treatment processes, and other basic technologies for electronic materials manufacturing; and production technologies such as quality stabilization, a quality management system, and a feedback mechanism for improving production processes based on production history.
- Based on the acquired technology, developed proprietary water-soluble polyimide and promoted commercialization activities aimed at multi-purpose applications.
- Set up and ran the development team, and actively pushed partnerships with internal and external departments to accelerate and streamline the project.

(2) Highly durable, high-performance organic photoreceptors.

- Designed the molecular structure of a highly durable, high-performance organic photoreceptor offering excellent durability and lower cost, and built the optimal processing process to bring out its properties, developing a highly durable, high-performance organic photoreceptor with high charge transport capability and a lifetime 2 to 3 times that of conventional devices.

(3) R&D of carbon fiber reinforced resins

- Developed a proprietary formulation design guideline enabling higher elasticity, and developed a compound exhibiting twice the elastic modulus of conventional materials.
- Conducted new business studies (market, technology and customer surveys) using the developed technology, drew up and proposed a plan, initiated collaboration with internal and external partner departments, and started business activities at an early stage.
- Designed compounds made from various resins (PP, PE, PA, PBT, PET, thermoplastic PI, etc.) and built the manufacturing technology.
- In charge of overall patent activities, completing survey, filing and rights acquisition in one year and advancing the early establishment of the business foundation.

Shiseido Co., Ltd.: January 1996 - December 2002

After working on product and business development using cosmetics technology, developed cosmetic raw materials based on the knowledge acquired, and then worked on product development.

(1) Promoted new business development in the electronic materials field using cosmetics technology. Developed a product applying the light-control technology used in make-up to backlight-related components of liquid crystal display elements and exhibited it at trade shows. Pursued a business feasibility study after receiving inquiries from Japan and overseas, but withdrew after judging that it did not fit market trends.

(2) Development of cosmetic functional materials: Developed light-control materials mainly from inorganic materials and achieved their introduction into make-up and skincare products.

(3) Product development of make-up products: In charge of emulsified foundation, developing products for various brands. Mainly responsible for developing a distinctive brand for overseas markets. Proposed and commercialized a new-genre product advocating a new concept using the above light-control technology and developed materials.

Item	Details
Products handled	Liquid crystal display element components (reflectors, transflectors, diffusers)
Duties	New business development activities. Development of sheet fabrication technology. Development of new inorganic particle materials. Application building. Emulsified foundation product development.
Skills acquired	Sheet component manufacturing technology. Inorganic synthesis technology. Emulsification technology.

Japan Synthetic Rubber Co., Ltd. (now JSR): April 1990 - December 1995

(1) Development of polyimide liquid crystal alignment materials

Developed a new monomer with a steroid structure and the corresponding polyimide, and achieved market introduction. Market share was then about 10 to 20%, but as adoption of the developed product advanced it grew to over 80%. Subsequently expanded monomer variations and built a technology portfolio that continued to meet market requirements. Thirty years have now passed since development, and the share is still maintained at 50%, making it a long-lived technology.

Also began work on photo-alignment technology as a next-generation material; the material concept developed was announced as put to practical use by Company S 20 years later.

- Commercialization of proprietary molecular-design materials with advantages in liquid crystal alignment and electrical properties.
- Development of basic production technology (design of functional monomers, development and mass production of highly efficient polymerization processes, etc.).
- Development of individual products reflecting customer requirements and market introduction.

- Contributed to the market expansion of liquid crystal displays (LCD), and subsequently received various industry awards (Ichimura Prize, Society of Polymer Science Award, Chemical Society of Japan Award).
- Management and promotion of development task teams

Item	Details
Products handled	Liquid crystal alignment agents (polyimide materials)
Duties	Design, synthesis and mass production of functional monomers that deliver the required performance. Polymerization and mass production of condensation polymers.
Skills acquired	Organic synthesis technology. Polymer polymerization technology. General chemical analysis. Patent searches. Drafting of patent specifications. Team management and program promotion.

Key Strengths

(1) Work experience

Area	Details
Technology development	Track record and experience across a wide range of fields in organic, polymer and inorganic materials.
Product development	Track record in developing a wide range of products across electronic materials, cosmetic materials and cosmetics.
Intellectual property	Can handle searches and analysis, drafting of patent specifications, and rights acquisition.
Business development	Electronic materials, resin materials.
Safety	Safety management committee member at research laboratories and manufacturing sites.
Quality control	Design of manufacturing infrastructure and cleanrooms for electronic materials. Establishment of product quality standards. Building of quality control systems for manufacturing.

(2) Management: Experienced in running and managing teams of about 5 to 20 members. Manages with a small, agile team that makes use of each member's characteristics, aiming to obtain results in a short period.

(3) Intellectual property: 339 patent applications and 259 registered patents (December 2024).

(4) 6 conference presentations and 6 published papers. 2 joint research activities proposed and carried out.

(5) Consulting and technical guidance: Using the Professional Engineer, Japan qualifications obtained (Chemistry and Engineering Management), has experience providing technical guidance on chemical materials development, mass production technology, and business improvement methods.

- Chinese manufacturer: technical guidance on liquid crystal display material technology.
- Japanese manufacturer: technical guidance on synthesis and evaluation technology for polymer materials. Held a project management seminar.