

FOR INFORMATION

# COMPANY PROFILE

## MPAO LAB SPC COMPANY



INNOVATION & CHALLENGE

**MPAO LAB S.P.C**

Fine Chemical R&D, Medical Product Trading,  
Business Consultancy, Technical Consultancy



[WWW.MPAOLAB.COM](http://WWW.MPAOLAB.COM)



**MPAO LAB S.P.C**  
Fine Chemical R&D, Medical Product Trading,  
Business Consultancy, Technical Consultancy

# COMPANY PROFILE

## 1. COMPANY OVERVIEW

- (1) INTRODUCTION
- (2) HISTORY

## 2. OUR SERVICE

- (1) BUSINESS CATEGORY
- (2) R&D FOR MPAO PROJECT
- (3) BUSINESS CONSULTANCY
- (4) PRODUCT AGAINST COVID-19

## 3. CONTACT DETAIL

**FOR INFORMATION**



**MPAO LAB S.P.C**  
Fine Chemical R&D, Medical Product Trading,  
Business Consultancy, Technical Consultancy

# COMPANY PROFILE

## INTRODUCTION



**INNOVATION & CHALLENGE**

### **Innovation & Challenge**

*MPAO LAB was established in Kingdom of Bahrain in 2018.*

*As the fine chemical developer, we are researching the innovative chemical process and developing it until the launch of commercial project. As our initial project, we are proceeding the project of R&D for Metallocene poly alpha olefin with KRICT (Korea Research Institute of Chemical Technology).*

*Also we are finding the qualified company in abroad and providing them the business consultancy to start their business in middle east area in aspects of sales, marketing and technical.*

*Moreover, we are introducing the Korean qualified product against covid-19 to Middle east market and also directly supplying this product to customer as agent.*

*As per our company motto "Innovation & Challenge", we are always thinking the innovatively and acting with challenge to improve the quality of human life. Also we wish that we'll be an sustainable developing company from middle ease area to worldwide.*

**CEO, Mr. Kilnam, Choi**  
**/ MPAO LAB SPC Company**

**FOR INFORMATION**

[WWW.MPAOLAB.COM](http://WWW.MPAOLAB.COM)



**MPAO LAB S.P.C**  
Fine Chemical R&D, Medical Product Trading,  
Business Consultancy, Technical Consultancy

## COMPANY PROFILE

### HISTORY



**FOR INFORMATION**

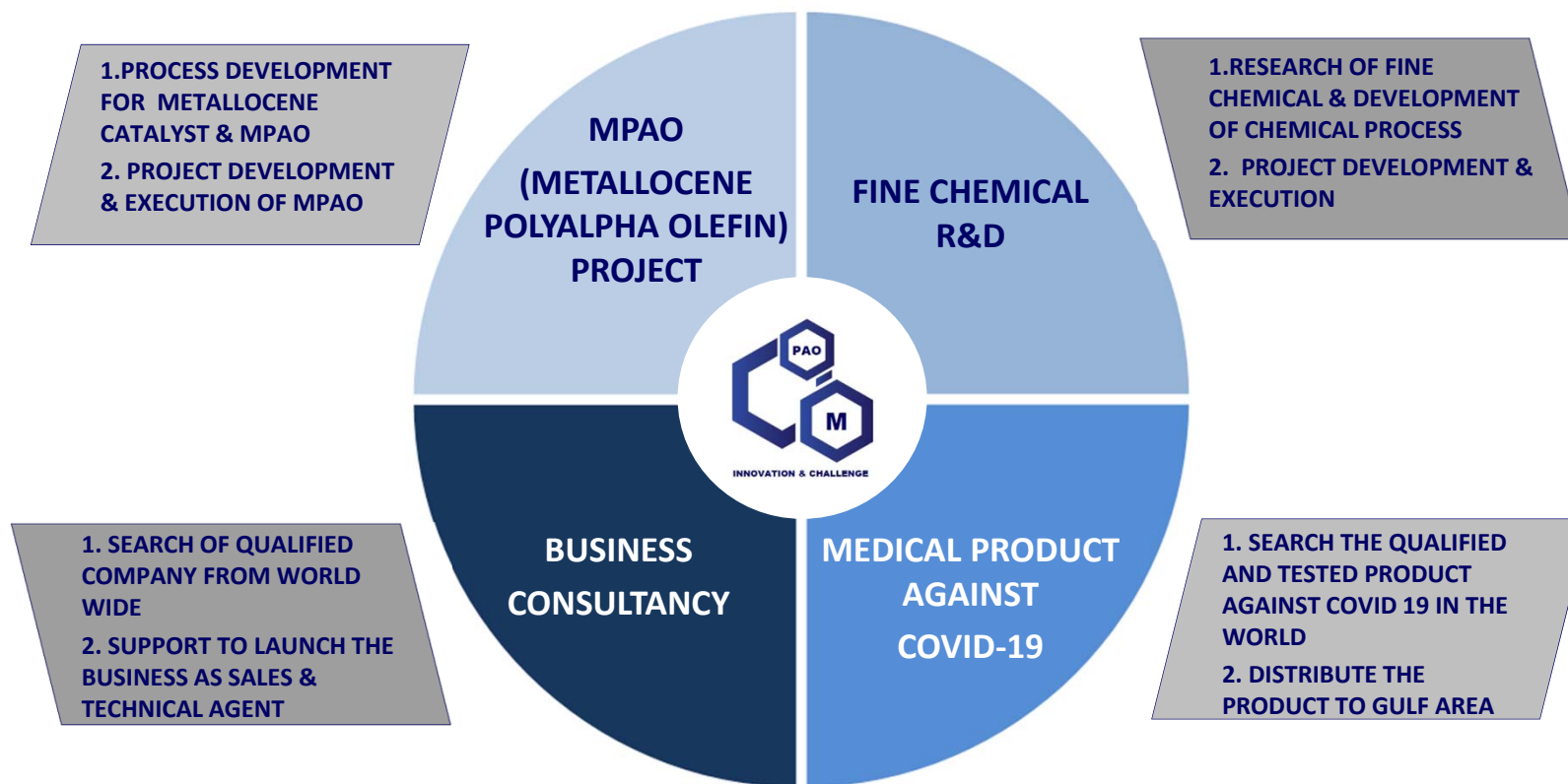
[WWW.MPAOLAB.COM](http://WWW.MPAOLAB.COM)



**MPAO LAB S.P.C**  
Fine Chemical R&D, Medical Product Trading,  
Business Consultancy, Technical Consultancy

## OUR SERVICE

### BUSINESS CATEGORY



**FOR INFORMATION**

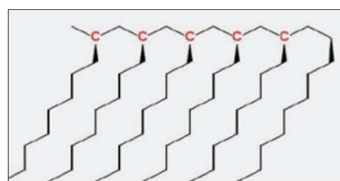


**MPAO LAB S.P.C**  
Fine Chemical R&D, Medical Product Trading,  
Business Consultancy, Technical Consultancy

INNOVATION & CHALLENGE

## OUR SERVICE : R&D FOR MPAO

### R&D FOR MPAO PROJECT



#### \*MPAO (Metallocene Poly Alpha Olfen)

a class of specialty chemical generally purchased as a base stock by commercial lubricant formulators and blenders to produce high performance synthetic lubricants for sale into the aviation, automotive, locomotive, power and industrial machinery sectors.

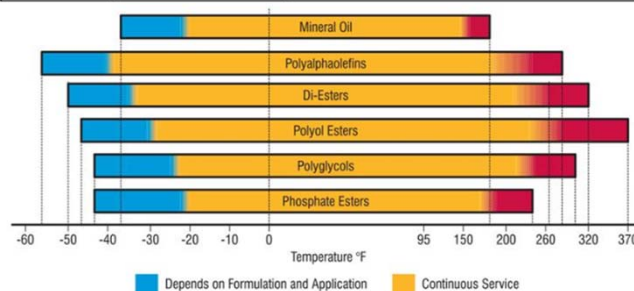
	Group	Manufacturing Process	Saturate Level	Sulfur Level	Viscosity Index
LESS STABLE	Group I	Solvent Refining	< 90%	> 0.03%	80 - 120
	Group II	Hydro-processing (Hydrocracking)	≥ 90%	≤ 0.03%	80 - 120
	Group III	Severe Hydrocracking (Catalytic De-waxing)	≥ 90%	≤ 0.03%	≥ 120
	Group IV	Chemical Reactions (Synthesizing)	100% PAOs (Poly-Alpha-Olefins)		
MORE STABLE	Group V	As Indicated	All others not included in Groups I, II, III or IV		

#### PHYSICAL PROPERTY OF MPAO

- VERY LOW CONCENTRATION OF IMPURITIES
- EXTREMELY STABLE MOLECULE
- HIGH VISCOSITY INDEX
- LOW POUR POINT
- COMPATIBLE WITH OTHER BASE STOCK COMPONENTS & ADDITIVE COMPONENTS
- HIGH IGNITION TEMPERATURE & FLASH TEMPERATURE
- LOW VAPOR PRESSURE

#### CHARACTERISTIC OF MPAO (COMPARING WITH GROUP I, II, III)

- MUCH WIDER VISCOISTY RANGE
- HIGHER VISCOSITY INDEX
- LOWER TEMPERATURE FLUIDITY
- LOWER VOLATILITY
- BETTER OXIDATIVE /THERMAL STABILITY



**FOR INFORMATION**



**MPAO LAB S.P.C**  
Fine Chemical R&D, Medical Product Trading,  
Business Consultancy, Technical Consultancy

INNOVATION & CHALLENGE

## OUR SERVICE : R&D FOR MPAO

### APPLICATION OF MPAO PROJECT

#### APPLICATION OF LUBRICANT FROM MPAO

Automatic transmission fluid	Heat transfer fluid (refrigerant)
Brake fluid	Hydraulic fluid
Compressor oil	Metalworking fluid
Conveyor lubricant	Oil and gas drilling fluid
Cosmetic additive	Optical fiber coating
Dielectric fluid (transformer oil)	Pump lubricant
Engine lubricant	Shock absorber fluid
Gear oil	Steam and wind turbine oils
Grease	Textile machine lubricant

Source: IHS © 2016 IHS

#### OTHER APPLICATION OF MPAO

Heat transfer fluid (refrigerant)	Pipeline drag reducing agent
Hair conditioning additive	Lipstick gloss agent
Cosmetic additive	Skin moisturizer
Stabilize lotions	

Source: IHS © 2016 IHS

#### COMMERICALIZED PRODUCT BRAND FROM POLY ALPHA OLEFIN (SYNTHETIC LUBE OIL)

- MOBIL 1 & MOBIL SUPER
- CASTROL EDGE
- VALVOLINE SYNPOWER
- SHEL ROTELLA
- PENNZOIL
- ROYAL PURPLE
- S-OIL 7
- AMSOIL
- KIXX PAO1

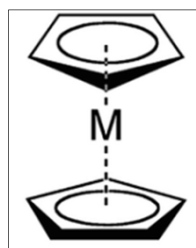


**FOR INFORMATION**



## OUR SERVICE : R&D FOR MPAO

### ABOUT METALLOCENE CATALYST

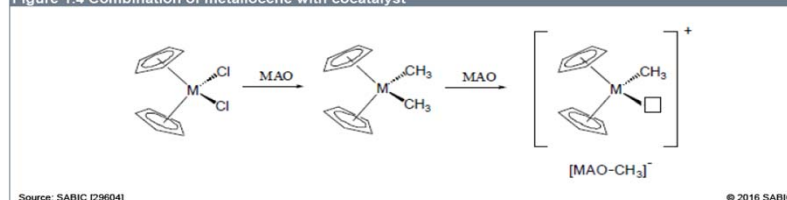


#### \*Metalocene Catalyst

Metallocenes are very effective metal catalyst which combine an organic framework with an active metal. Commercial metallocene catalysts generally use two cyclopentadiene anions for the organic component, sandwiching the metal cation between them.

Metallocene Catalyst also known as single site catalysts because they have only one active site per catalyst particle, which are all identical.

Figure 1.4 Combination of metallocene with cocatalyst



#### \*\*Advantage of Metallocene Catalyzed Polymerization

- Like Ziegler-Natta catalysts, allows control over PE structure (branching) and polymer tacticity
- Synthesis of ultra high MW polyethylene
- High activity and ability to make coatings due to homogeneous nature
- Single-site catalyst – achieve low MW distributions (PDI<2)
- A wide variety of metallocene polyethylene can be produced with very different properties ranging from very soft with low melting point to high melting point with good heat resistance.

**FOR INFORMATION**

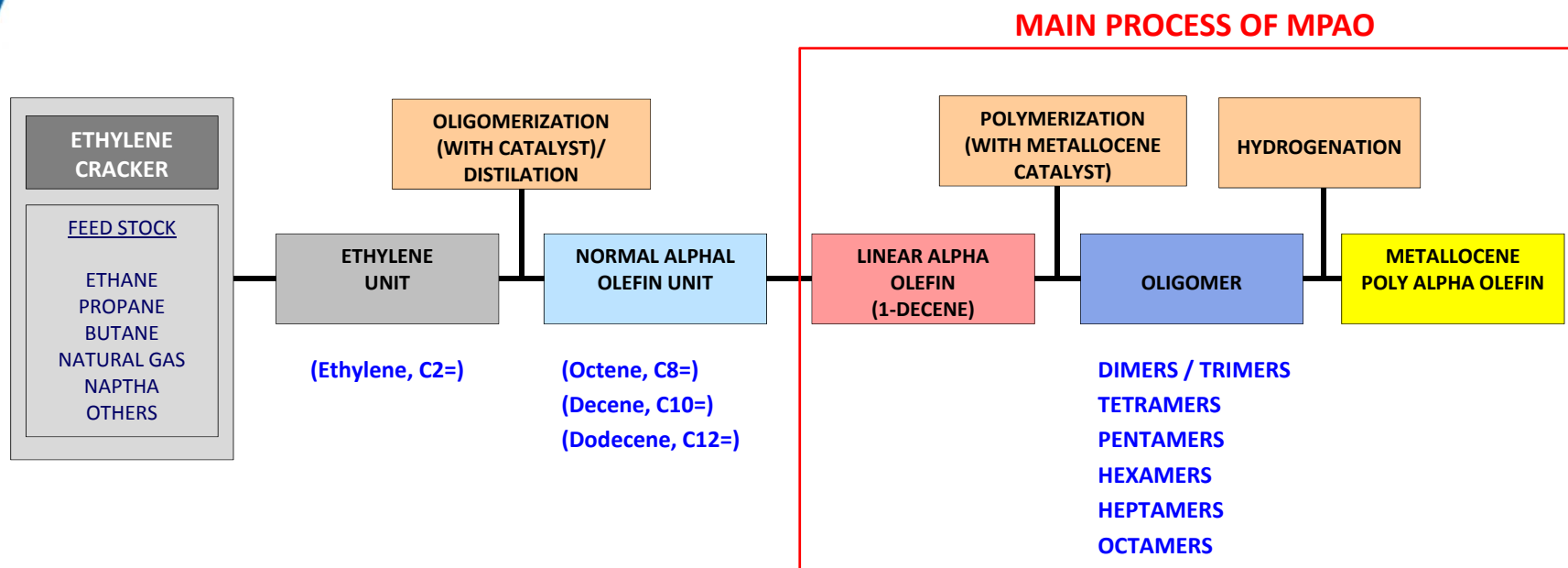




**MPAO LAB S.P.C**  
Fine Chemical R&D, Medical Product Trading,  
Business Consultancy, Technical Consultancy

## OUR SERVICE : R&D FOR MPAO

### PROCESS FOR MPAO PROJECT



**FOR INFORMATION**



**MPAO LAB S.P.C**  
Fine Chemical R&D, Medical Product Trading,  
Business Consultancy, Technical Consultancy

## OUR SERVICE : R&D FOR MPAO

### STATUS FOR DEVELOPMENT OF MPAO PROJECT

#### MAIN PURPOSE OF R&D FOR MPAO

1. R&D for process of poly alpha olefin by metallocene catalyst
2. Own Patent & Intellectual Property for process of MPAO
3. Invite Investment for MPAO Plant by Feasibility Study
4. FEED (Basic Engineering) work for MPAO
5. Execution of 100 ton Pilot MPAO Plant in Saudi Arabia
6. Execution of 50,000 ton Commercial MPAO Plant in Saudi Arabia

#### CURRENT STATUS

1. Contract of R&D for MPAO Process with KRICT (Korea Research Institute of Chemical Technology)
2. On going for Experimentation for chemical process of MPAO
3. Preparation of Patent for MPAO Process
4. Start of Feasibility Study & Financial Simulation

**FOR INFORMATION**



**MPAO LAB S.P.C**  
Fine Chemical R&D, Medical Product Trading,  
Business Consultancy, Technical Consultancy

## OUR SERVICE : R&D FOR MPAO

### STATUS FOR DEVELOPMENT OF MPAO PROJECT

#### CONTRACT WITH KRICT

<별표 제3호> (개정 2017.9.11)  
**연구계약서**  
COLLABORATIVE RESEARCH AGREEMENT

□ 연구 과제명 : mPAO process 개발 및 촉매 최적화  
□ 계약 당사자 : MPAO LAB S.P.C.  
대표 Kilnam Choi  
Office No. 31, Bldg No. 1575,  
Road No. 6631, Block No. 646,  
Al Nuwaidrat, Kingdom of Bahrain  
(이하 "위탁자"라 한다)

한국화학연구원  
원장 이미혜  
대외협력국 국제협력팀 유성구  
가칭로 141  
(이하 "연구원"이라 한다)

□ 연구 목적 : 한국화학연구원 책임연구원 조목희  
위 연구에 관하여 "위탁자"와 "연구원"은  
다음과 같이 계약을 체결한다.

제1조(연구목적)  
본 연구의 목적은 별첨 연구제약서와 같다.

제2조(연구범위)  
본 연구의 범위는 별첨 연구제약서와 같고,  
"연구원"이 연구원료 등 "위탁자"에게 제공되는  
연구결과에 연구목표에 기술되어 있는 사항에 한한다.

□ Title of Research : Process Development for mPAO &  
Metalloene Catalyst  
□ Parties : MPAO LAB S.P.C.  
CEO : Mr. Kilnam, Choi  
Office No. 31, Bldg No. 1575,  
Road No. 6631, Block No. 646,  
Al Nuwaidrat, Kingdom of Bahrain  
(hereinafter referred to as the "Sponsor")  
Korea Research Institute of Chemical  
Technology  
Chairman : Ms. M.H. Lee  
141, Gajeonggu, Yuseong, Daejeon 34114,  
Republic of Korea  
(hereinafter referred to as the "Performer")  
□ Principal Research Scientist : Mr. DH, Cho

THIS AGREEMENT is entered into on the date of  
execution of this Agreement by and between both Parties  
"Sponsor" and "Performer".

1. Purpose of Research  
The purpose of research is set forth in more detail in  
the Performer's proposal attached as Appendix A  
(Research Proposal).

2. Scope of Research  
The scope of research is set forth in more detail in the  
Performer's proposal attached as Appendix A  
(Research Proposal). The Performer agrees to assign  
professionally qualified personnel and to perform the  
work in accordance with generally accepted  
professional standards.

KRICT

위탁자  
회사명 : MPAO LAB S.P.C.  
대표 : Mr. Kilnam Choi  
주소 : Office No.31, Building No.1575, Road  
No.4631, Block No.646, Al Nuwaidrat,  
Kingdom of Bahrain

서명 : 

연구원  
연구원명 : 한국 화학 연구원  
원장 : 이미혜  
주소 : 대전광역시 유성구 가칭로 141

서명 : 

Sponsor **MPAO LAB S.P.C Company**  
Company : MPAO LAB S.P.C  
CEO : Mr. Kilnam, Choi  
Address : Office No. 31, Bldg No. 1575, Road No. 4631,  
Block No. 646, Al Nuwaidrat,  
Kingdom of Bahrain

Signature 

Performer **KRICT**  
Company : Korea Research Institute of Chemical  
Technology  
Chairman : Ms. M.H. Lee  
Address : 141, Gajeonggu, Yuseong, Daejeon 34114,  
Republic of Korea

Signature 

FOR INFORMATION



**MPAO LAB S.P.C**  
Fine Chemical R&D, Medical Product Trading,  
Business Consultancy, Technical Consultancy

## OUR SERVICE : R&D FOR MPAO

### LABORATORY FOR R&D OF MPAO (IN KRICT)



KRICT LAB FACILITY FOR MPAO



**FOR INFORMATION**



**MPAO LAB S.P.C**  
Fine Chemical R&D, Medical Product Trading,  
Business Consultancy, Technical Consultancy

## OUR SERVICE : BUSINESS CONSULTANCY

### STATUS FOR PARTNERSHIP

#### FILTRATION AREA



##### **JFC Corporation (South, Korea)**

As Korean leading industrial filtration manufacturing company, they can supply strainer, filter and all kinds of industrial filtration equipment and provide technical solution, site supervision & site modification work.



##### **GM Chemical(South, Korea)**

As Korean experienced chemical cleaning company, they can provide the professional cleaning service for chemical plant. Also especially they will provide the cleaning service of metal cartridge for customer's cost saving and stable operation of plant.

#### SEPARATION AREA



##### **HANBIT SOLTECH (South, Korea)**

As Korean experienced & professional supplier of separation equipment, Tray & Packing and demister, they can improve the efficiency of customer's equipment in plant and provide the solution for separation issue.

MPAO LAB S.P.C made a contract with partners and provide sales, marketing and technical agent services to start their business successfully in Middle East Area.

**FOR INFORMATION**





**MPAO LAB S.P.C**  
Fine Chemical R&D, Medical Product Trading,  
Business Consultancy, Technical Consultancy

## OUR SERVICE : PRODUCT AGAINST COVID 19

### PRODUCT AGAINST COVID 19



As World is suffering through pandemic by Covid-19 and importance of self hygiene must be increased, MPAO LAB S.P.C is supplying the qualified hygiene product against Covid-19. Also we think that these kind of product can protect the human from any disease and quality of human life will be improved through self hygiene product.

### LINE UP FOR PRODUCT AGAINST COVID-19

- ANTI MICROBIAL PRODUCT
  - ANTI MICROBIAL FILM
  - ANTI MICROBIAL LIQUID SPRAY
  - ANTI MICROBIAL CONTAINER & PACKING MATERIAL
- ANTI MICROBIAL ANTI MOLD PRODUCT
  - ANTI MICROBIAL COATING AGENT
  - ANTIFUNGUAL PAINT
- GENE FINDER REAL AMP KIT (TEST KIT FOR COVID-19)
- INSTRUMENT FOR TEST KIT
- SELF RAPID TEST KIT (TEST KIT FOR COVID-19)
- MOIST HAND SANITIZER
- LASER LANCING DEVICE

**FOR INFORMATION**



**MPO LAB S.P.C**  
Fine Chemical R&D, Medical Product Trading,  
Business Consultancy, Technical Consultancy

INNOVATION & CHALLENGE

## OUR SERVICE : PRODUCT AGAINST COVID 19

### PARTNERSHIP OF PRODUCT AGAINST COVID 19



#### ECO JOIN

ANTI MICROBIAL PRODUCT (FILM,  
SPRAY, COATING AGENT, PAINT)



#### OSANG HEALTHCARE

AMP TEST KIT FOR COVID-19  
& INSTRUMENT



#### SD BIOSENSOR

RAPID (FAST) TEST KIT FOR  
COVID-19



#### FANIPIN KOREA

MOIST HAND SANITIZER



#### LAMEDITECH

LASER LANCING  
DEVICE



**FOR INFORMATION**





**MPAO LAB S.P.C**  
Fine Chemical R&D, Medical Product Trading,  
Business Consultancy, Technical Consultancy

**END**



**MPAO LAB S.P.C**  
**Business Consultancy**

E-mail : [info@mpaolab.com](mailto:info@mpaolab.com)  
[em@mpaolab.com](mailto:em@mpaolab.com)

TEL : (+973) 1721 1890

**FOR INFORMATION**

[WWW.MPAOLAB.COM](http://WWW.MPAOLAB.COM)