研究报告 Research Report

13 Jun 2023

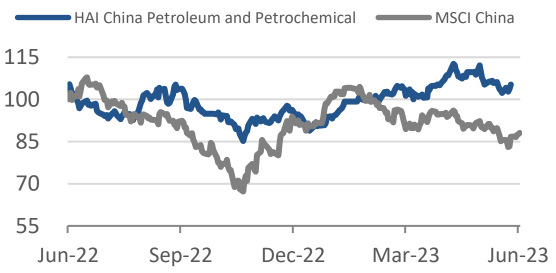
中国石油石化 China Petroleum and Petrochemical

国内氢能产业布局综述

Overview of Domestic Hydrogen Energy Industry Layout

观点聚焦 Investment Focus

股票名称	评级	股票名称	评级
中国石油	Outperform	华润材料	Outperform
中国石化	Outperform	九丰能源	Outperform
中国海油	Outperform	东华能源	Outperform
荣盛石化	Outperform	胜华新材	Outperform
恒力石化	Outperform	维远股份	Outperform
东方盛虹	Outperform	华锦股份	Outperform
新奥股份	Outperform	滨化股份	Outperform
中海油服	Outperform	海优新材	Outperform
卫星化学	Outperform	卓然股份	Outperform
广汇能源	Outperform	卓越新能	Outperform
桐昆股份	Outperform	同益中	Outperform
上海石化	Outperform	德美化工	Outperform
中油工程	Outperform	蒙泰高新	Outperform
齐翔腾达	Outperform	万凯新材	Outperform
纳微科技	Outperform	天振股份	Outperform
新凤鸣	Outperform	鹿山新材	Outperform



资料来源： Factset, HTI

Related Reports

石化周报：石化国企有望迎来中国特色估值重塑 （Weekly Report: Petrochemical State-Owned Enterprises Promising Valuation With Chinese Characteristics）(5 Jun 2023)

石化周报："一带一路"下的石化合作 （Weekly Report: Petrochemical Cooperation Under "The Belt And Road Initiatives"）(28 May 2023)

石化周报：海外气价回落，LNG 接收站周转有望提升，价值重估 （Weekly Report: Overseas Gas Prices Fall Back, LNG Receiving Terminal Turnover Expected To Improve, Revaluation）(21 May 2023)

(Please see APPENDIX 1 for English summary)

- **核心观点：** 近年来，我国着力布局氢能产业，为氢能技术与产业链的进一步发展打下良好基础。除一系列顶层设计，各地方政府发布相关配套政策，共同构建起涵盖科技创新、应用示范、基础设施、产业布局等各环节的氢能综合发展体系。
- **可再生氢产能稳步提高。** 截止 2022 年底，全球电解水制氢累计装机容量 700MW，同比新增 170MW，约+32%。新增装机容量可生产可再生氢气 9 万吨/年。其中，我国累计装机容量 300MW，占比最高，为 43%；欧洲 180MW，占比 26%；北美 80MW，占比 11%；其他国家及地区 140MW，占比 20%。我国电解水制氢装机容量以碱槽为主，欧洲及北美地区以 PEM 为主。
- **氢能技术取得突破进展。** 中国已掌握氢能制备、储运、加氢、燃料电池和系统集成等主要技术和生产工艺。（1）制氢方面，车用质子交换膜、电池系统集成取得突破，相关产业链已经建立；面向氢能重卡的大功率燃料电池系统成为氢能产品的高技术亮点，具备国际领先水平。但电堆水平和国外仍有差距，膜电极等基础材料技术成为下一步亟需攻克的瓶颈。（2）储氢方面，在长距离输送氢气技术方面获得突破。中国石化"西氢东送"起于内蒙古自治区乌兰察布市，终点位于北京市，管道全长 400 多公里，是我国首条跨省区、大规模、长距离的纯氢输送管道。管道建成后，将用于替代京津冀地区现有的化石能源制氢，大力缓解我国绿氢供需错配的问题，对今后我国跨区域氢气输送管网建设具有战略性示范引领作用。
- **氢能应用领域逐步扩大。** 我国已在部分区域实现燃料电池汽车小规模示范应用，氢燃料电池汽车保有量达 14979 辆，居全球第三。加氢站网点建设正在铺开。到 2022 年年底，中国已建成加氢站 310 座，居世界第一。氢能产业呈现集群化发展态势。京津冀、长三角和粤港澳大湾区汇集全产业链规模以上工业企业超过 300 家。
- **我国积极融入全球氢能产业供应链。** 我国加强与各国在技术创新、绿色氢能贸易、标准规则等方面的开放合作。根据国家能源集团官网，2023 年 4 月，国家能源集团与法国电力集团签署扩展合作协议，规划在江苏东台共同建设"风光氢储"绿色能源协同融合的海上综合智慧能源岛示范项目，总规划装机 150 万千瓦，并将积极达成第三方市场可再生能源项目的具体合作投资机会。
- **投资建议。** 氢能已成为构建未来清洁低碳、安全高效、可持续发展的能源的重要载体。欧美、日韩等主要国家和地区，都把绿氢作为未来产品发展战略，并且相继制定了最新的供应策略、应用以及降本路径，加速产业发展，世界氢能产业发展已进入重要窗口期。建议关注相关石化企业**中国石化、中国石油、卫星化学、东华能源、宝丰能源**等。
- **风险提示：** 氢能产业发展不及预期；下游需求不及预期；政策风险等。

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1. 建议关注：中国石化、荣盛石化、桐昆股份、新奥股份、卫星化学、恒力石化、东方盛虹

1.1 中国石化

（1）我们预计 2023 年随着下游需求改善，炼化行业景气度有望逐步回升。（2）高分红：2021 年中石化 A 股、H 股股息率分别为 10.8%、14.3%，行业领先。（3）回购增强股东回报。2022 年 9 月 21 日-2022 年 11 月 25 日，公司使用 18.88 亿元回购 A 股股份 4.42 亿股，回购均价 4.27 元/股。

风险提示：原油、天然气价格回落；石化产品价差继续低位维持；炼化行业景气度下降。

1.2 荣盛石化

（1）控股 4000 万吨/年浙石化 51%股权，我们预计 2023 年随着下游需求改善，炼化行业景气度有望逐步回升。（2）完善下游新材料布局，重点布局新能源和高端材料领域，浙石化三大项目（二期工程产品结构优化、高端新材料、高性能树脂项目）合计总投资规模 1178 亿元，主要包括 EVA、DMC、ABS、α 烯烃-POE、己二腈-PA66 等产品，公司预计年均可实现净利润合计 164 亿元。

风险提示：原油价格下跌；产品价格下跌；项目进度不及预期。

1.3 桐昆股份

（1）涤纶行业龙头，主业稳步扩张，提供业绩增量。截至 2022 年上半年，公司 PTA 产能 420 万吨/年，涤纶长丝产能 950 万吨/年。根据公司现有项目规划，未来公司 PTA 产能将达到 920 万吨/年，长丝（短纤）产能超过 1500 万吨/年。（2）参股大炼化。参股 20%的浙石化，2022 年 1 月浙石化二期项目全面投产，有助于公司投资收益提升。

风险提示：原油价格下跌；产品价格下跌；长丝产能扩张不及预期。

1.4 新奥股份

（1）天然气龙头企业，控股新奥能源 33%的股权，受益天然气需求较快增长。（2）注入舟山 LNG 接收站，接收站一、二期合计实际处理能力有望达到 800 万吨/年。

风险提示：天然气价格大幅波动；天然气消费增速不及预期。

1.5 卫星化学

（1）轻质化龙头，工艺具有成本低、排放低、副产氢等优势。（2）连云港年产 135 万吨 PE、219 万吨 EOE 和 26 万吨 ACN 联合装置项目二阶段工程全面投产，且主要原材料价格高位回落，我们预计盈利有望改善。（3）在建及储备项目提供未来增长动能，包括绿色化学新材料产业园项目（20 万吨/年乙醇胺、80 万吨/年聚苯乙烯、10 万吨/年 α-烯烃与配套 POE、75 万吨/年碳酸酯）、平湖基地新能源新材料一体化项目（年产 80 万吨 PDH、80 万吨丁辛醇）等。

风险提示：产品价格大幅波动；项目进展不及预期等。

1.6 恒力石化

（1）公司以“炼化+乙烯+煤化”为载体，强化上游大化工平台支撑，主要包括2000万吨/年炼油、150万吨/年乙烯、500万吨/年现代煤化工装置。（2）加速新材料布局，打造第二成长曲线，稳步推进160万吨/年高性能树脂及相关配套工程、260万吨/年功能性聚酯工程、30万吨/年己二酸化工新材料配套项目及16亿平锂电膈膜项目等在建项目建设。

风险提示：原油价格下跌；产品价格下跌；项目进度不及预期。

1.7 东方盛虹

（1）公司上游拥有1600万吨/年炼化一体化项目（2022年底全面投产）、240万吨/年甲醇制烯烃装置（MTO）、70万吨/年PDH装置，实现“油、煤、气”三种烯烃制取工艺路线全覆盖。（2）公司加快布局新材料产业链，规划未来实现EVA产能100万吨/年（现有30万吨/年）、POE产能50万吨/年（分期建设，其中800吨POE中试装置于2022年9月27日一次开车成功），并拟在湖北宜昌投资建设配套原料及磷酸铁、磷酸铁锂新能源材料项目。

风险提示：原油价格下跌；产品价格下跌；项目进度不及预期。

2. 一周跟踪：桐昆股份

2.1 桐昆股份

公司持股5%以上的股东磊鑫实业拟于2023年6月9日起12个月内增持公司股份不低于人民币2亿元，不超过人民币4亿元，增持价格不高于18元/股。

风险提示：原油价格下跌；产品价格下跌；长丝产能扩张不及预期。

3. 风险提示：

原油价格大幅波动；石化行业景气度下降；产品价格大幅波动。

APPENDIX 1

Summary

- **Conclusions:** In recent years, China has been vigorously promoting the development of the hydrogen energy industry, laying a solid foundation for the further advancement of hydrogen energy technology and the industry chain. In addition to a series of top-level designs, local governments have issued corresponding supporting policies to jointly build a comprehensive development system for hydrogen energy that covers various aspects, including scientific and technological innovation, application demonstrations, infrastructure, and industrial layout. We recommend: **CHINA PETROLEUM AND CHEMICAL**, **RONGSHENG PETRO CHEMICAL**, **TONGKUN GROUP**, **ENN NATURAL GAS**, **SATELLITE CHEMICAL**, **HENGLI PETROCHEMICAL**, **EASTERN SHENGHONG**.

- **Renewable hydrogen production capacity is steadily increasing.** At the end of 2022, the global cumulative installed capacity for electrolysis-based hydrogen production reached 700 MW, with an annual increase of 170 MW, approximately +32%. The additional installed capacity can produce 90,000 tons/year of renewable hydrogen gas. Among them, China has the highest cumulative installed capacity of 300 MW, accounting for 43%; Europe has 180 MW, accounting for 26%; North America has 80 MW, accounting for 11%; and other countries and regions have 140 MW, accounting for 20%. The installed capacity of Electrolysed water hydrogen production in China is mainly alkali tank, and PEM is mainly used in Europe and North America.

- **Breakthrough progress in hydrogen energy technology.** China has mastered major technologies and production processes for hydrogen production, storage, transportation, hydrogen refueling, fuel cells, and system integration. (1) In terms of hydrogen production, breakthroughs have been made in proton exchange membrane (PEM) fuel cells and battery system integration, with related industrial chains already established. High-power fuel cell systems for hydrogen-powered heavy-duty trucks have become a highlight of hydrogen energy products, reaching international leading levels. However, there is still a gap in stack performance and basic materials technology, such as membrane electrodes, which need to be urgently addressed. (2) In terms of hydrogen storage, breakthroughs have been made in long-distance hydrogen transportation technology. Sinopec's "West Hydrogen East Transmission" project starts from Ulanqab City in Inner Mongolia Autonomous Region and ends in Beijing, with a pipeline length of over 400 kilometers. It is the first inter-provincial, large-scale, long-distance pure hydrogen transportation pipeline in China. After completion, the pipeline will be used to replace fossil fuel-based hydrogen production in the Beijing-Tianjin-Hebei region, greatly alleviating the problem of mismatched supply and demand for green hydrogen in China and strategically demonstrating and leading the future construction of cross-regional hydrogen transportation pipeline networks in the country.

- **Investment Advice.** Hydrogen energy has become an important carrier for building a future clean, low-carbon, safe, efficient, and sustainable energy system. Major countries and regions such as Europe, the United States, Japan, and South Korea have identified green hydrogen as a key component of their future product development strategies. They have also formulated the latest supply strategies, applications, and cost reduction pathways to accelerate the development of the hydrogen industry. The global hydrogen energy industry has entered an important window of opportunity. It is suggested to pay attention to relevant petrochemical companies: **SINOPEC, PETROCHINA, SATELLTTE CHEMICAL, ORIENTAL ENERGY and NINGXIA BAOFENG ENERGY.**

- **Risks warning.** Significant fluctuations in crude oil prices. The prosperity of the petrochemical industry has declined. Product prices fluctuate significantly.

附录 APPENDIX

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分析师股票评级

优于大市，未来 12-18 个月内预期相对基准指数涨幅在 10%以上，基准定义如下

中性，未来 12-18 个月内预期相对基准指数变化不大，基准定义如下。根据 FINRA/NYSE 的评级分布规则，我们会将中性评级划入持有这一类别。

弱于大市，未来 12-18 个月内预期相对基准指数跌幅在 10%以上，基准定义如下

各地股票基准指数：日本 – TOPIX, 韩国 – KOSPI, 台湾 – TAIEX, 印度 – Nifty100, 美国 – SP500; 其他所有中国概念股 – MSCI China.

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Analyst Stock Ratings

Outperform: The stock's total return over the next 12-18 months is expected to exceed the return of its relevant broad market benchmark, as indicated below.

Neutral: The stock's total return over the next 12-18 months is expected to be in line with the return of its relevant broad market benchmark, as indicated below. For purposes only of FINRA/NYSE ratings distribution rules, our Neutral rating falls into a hold rating category.

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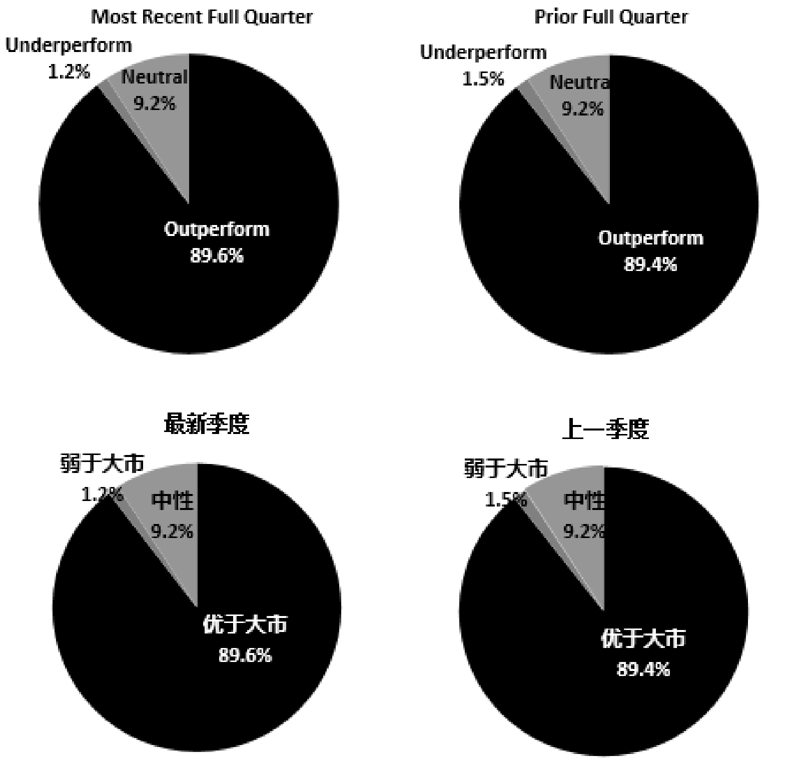
Benchmarks for each stock's listed region are as follows: Japan – TOPIX, Korea – KOSPI, Taiwan – TAIEX, India – Nifty100, US – SP500; for all other China-concept stocks – MSCI China.

评级分布 Rating Distribution



截至 2023 年 3 月 31 日海通国际股票研究评级分布

	优于大市	中性 (持有)	弱于大市
海通国际股票研究覆盖率	89.6%	9.2%	1.2%
投资银行客户*	5.2%	6.4%	9.5%

*在每个评级类别里投资银行客户所占的百分比。
上述分布中的买入，中性和卖出分别对应我们当前优于大市，中性和落后大市评级。
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买入，未来 12-18 个月内预期相对基准指数涨幅在 10%以上，基准定义如下

中性，未来 12-18 个月内预期相对基准指数变化不大，基准定义如下。根据 FINRA/NYSE 的评级分布规则，我们会将中性评级划入持有这一类别。

卖出，未来 12-18 个月内预期相对基准指数跌幅在 10%以上，基准定义如下

各地股票基准指数：日本 – TOPIX, 韩国 – KOSPI, 台湾 – TAIEX, 印度 – Nifty100; 其他所有中国概念股 – MSCI China.

Haitong International Equity Research Ratings Distribution, as of Mar 31, 2023

	Outperform	Neutral (hold)	Underperform
HTI Equity Research Coverage	89.6%	9.2%	1.2%
IB clients*	5.2%	6.4%	9.5%

*Percentage of investment banking clients in each rating category.

BUY, Neutral, and SELL in the above distribution correspond to our current ratings of Outperform, Neutral, and Underperform.

For purposes only of FINRA/NYSE ratings distribution rules, our Neutral rating falls into a hold rating category. Please note that stocks with an NR designation are not included in the table above.

Previous rating system definitions (until 30 Jun 2020):

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NEUTRAL: The stock's total return over the next 12-18 months is expected to be in line with the return of its relevant broad market benchmark, as indicated below. For purposes only of FINRA/NYSE ratings distribution rules, our Neutral rating falls into a hold rating category.

SELL: The stock's total return over the next 12-18 months is expected to be below the return of its relevant broad market benchmark, as indicated below.

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