Re-industrialization of EU

Advanced Materials for low carbon energy technologies

- Global trends in low carbon energy & Impact on Advanced Materials
- Proposed actions for further manufacturing of Advanced Materials in EU
- The EMERIT Industry-Driven Initiative & The role of open innovation

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EMIRI – November 2016
EMIRI Association works for the future of Advanced Materials * for low carbon energy (LCE) in Europe

EMIRI is an Industry Community coming together ...

EMIRI Association works for the future of Advanced Materials * for low carbon energy (LCE) in Europe

* Advanced Materials such as steel, non-ferrous metals, alloys, glass, ceramics, polymers, composites ...

Supported by Research & Technology Organizations

Spanning Innovation & Manufacturing

- Presence in 19 EU countries
- Over 80 innovation centers
- Over 50 manufacturing sites

* Founding / current members

With key Associations bringing in their expertise
A policy for re-industrialization of Europe in LCE should aim at balancing the 3 dimensions of sustainability

- **CLIMATE**
  - Reduction in CO\(_2\) & other GHGs
  - Resource efficiency

- **CITIZENS**
  - Secure access to low carbon & affordable energy
  - Quality jobs
  - Local investments by industry

- **INDUSTRY**
  - Competitiveness
  - Market opportunities
  - Profitability

EMIRI – November 2016
To reduce CO₂ emissions, the power sector has to contribute more than others through a shift to LCE technologies

**Figure I.1** Cumulative CO₂ reductions by sector and technology in the 2DS to 2050

**Key point** A portfolio of low-carbon technologies is needed to reach the 2DS; some solutions will be broadly applicable, while others will need to target specific sectors.

Source: International Energy Agency 2015
The development of these LCE technologies relies strongly upon Advanced Materials

- Cost of low carbon energy (LCE) technologies must keep coming down to ensure their adoption & deployment across EU in frame of Energy Union.
- This is made possible by reduction in cost, increase in performance, and extension of lifetime of the Advanced Materials.
- Innovation in Advanced Materials is crucially needed and long, risky and capital-intensive innovation cycles would benefit from risk-sharing at EU level.

![Cell cost breakdown, 2015](image)

- Reducing cost/kWh
- Reducing cost/kg
- Increasing kWh/kg
And the EU-based Industry of Advanced Materials for LCE is a source of growth and jobs for EU

<table>
<thead>
<tr>
<th>Revenues from operations in EU</th>
<th>Manufacturing sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>~ 30 billion €</td>
<td>&gt; 300</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Direct jobs</th>
<th>Researchers in industry</th>
</tr>
</thead>
<tbody>
<tr>
<td>~ 110,000</td>
<td>~ 5,000 researchers</td>
</tr>
<tr>
<td>Direct &amp; indirect jobs &gt; 500,000</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>R&amp;D spending</th>
<th>Capital expenditures</th>
</tr>
</thead>
<tbody>
<tr>
<td>~ 800 million €</td>
<td>~ 2 billion €</td>
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</tbody>
</table>

* EMIRI internal evaluation

Global trends however affecting the EU-based Industry of Advanced Materials for LCE and (future) EU policies need to take these into account
**Trend 1** Developing countries now invest more than developed countries in RE* and China has already overtaken the EU in terms of investment.

* RE stands for Renewable Energy (a subset of low carbon energy)
Trend 2 Consequently, RE capacity is developing much faster in China than anywhere else in the world.

- **Investment in RE (billion USD) over 2012-2015**
  - Global: 1.050 USD
  - ROW: 318 billion USD (30%)
  - USA: 157 billion USD (15%)
  - Europe: 260 billion USD (25%)
  - China: 315 billion USD (30%)

- **Change in RE capacity (GW) over 2012-2015**
  - Global: 405 GW
  - ROW: 124 GW (31%)
  - USA: 32 GW (8%)
  - Europe: 72 GW (18%)
  - China: 177 GW (44%)

- **RE capacity (GW) in 2015**
  - Global: 1.965 GW (+26% vs. 2012)
  - ROW: 753 GW (38%)
    - USA: 215 GW (11%)
    - Europe: 493 GW (25%)
    - China: 504 GW (26%)

* RE – Renewable Energy

“China is becoming world’s renewable energy power station”
**Trend 2** In the next 5 years, China will take the lead in RE with EU following

- **Wind Turbines**
  - 2 wind turbines installed every hour in China
  - Wind capacity
  - China: 0, 42, 113, 250 (2005-2020)

- **Solar Panels**
  - 7,000 solar panels installed every hour in China
  - Solar capacity
  - China: 0, 1, 43, 160 (2005-2020)
  - EU: 2, 30, 100, 120 (2005-2020)

Sources: European Commission; EWEA; IEA; E3G; Xinhuanet; State Grid

- Building on its leadership in wind and solar energy, China’s next energy challenge will be electric vehicles (EVs)
- In 2015, EV sales in China were 50% higher than in EU
- China plans a 10-fold increase by 2020 with strong involvement in battery value chain
Trend 3 Manufacturing of devices & components moving to growing markets (leading to new industrial champions & EU dependency on imported technologies) (1/2)
**Trend 3** Manufacturing of devices & components is moving to growing markets (leading to new industrial champions & EU dependency on imported technologies) (2/2)

**Top 10 PV Cell Manufacturers in 2015**

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Technology</th>
<th>Cell Manufacture Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trina Solar</td>
<td>c-Si</td>
<td>China/Netherlands</td>
</tr>
<tr>
<td>JA Solar</td>
<td>c-Si</td>
<td>China/Malaysia</td>
</tr>
<tr>
<td>Hanwha Q-Cells</td>
<td>c-Si</td>
<td>China/Germany/Malaysia/South Korea</td>
</tr>
<tr>
<td>Canadian Solar</td>
<td>c-Si</td>
<td>China</td>
</tr>
<tr>
<td>First Solar</td>
<td>CdTe/c-Si</td>
<td>U.S./Malaysia</td>
</tr>
<tr>
<td>Jinko Solar</td>
<td>c-Si</td>
<td>China/Malaysia</td>
</tr>
<tr>
<td>Yingli Solar</td>
<td>c-Si</td>
<td>China</td>
</tr>
<tr>
<td>Motech Solar</td>
<td>c-Si</td>
<td>Taiwan/China</td>
</tr>
<tr>
<td>NeoSolar</td>
<td>c-Si</td>
<td>Taiwan/China</td>
</tr>
<tr>
<td>Shungfeng-Suntech</td>
<td>c-Si</td>
<td>China/U.S. (Suniva investment)</td>
</tr>
</tbody>
</table>
Trend 4 Europe is losing leadership in R&D investment in the field and risk is strong that Innovation Centers also offshore to growing markets

- R&D spending on RE technologies almost unchanged at $9.1 billion in 2015 (23% below 2013 high)
- China challenged Europe in R&D spending each $2.8 billion. Spending in Europe fell 8% compared to 2014 while it rose 4% in China driven by Government support
- Global R&D spending by Governments was 3% lower than in 2014 (18% lower in EU but 7% higher in China) but fall offset by 3% rise in corporate R&D
- Solar continues to dominate renewable energy R&D with $4.5 billion spending equal to spending in all other sectors combined
**Impact** These trends already show strong impact on job creation in RE in Europe versus other regions

<table>
<thead>
<tr>
<th>Net change in RE jobs over 2012-2015</th>
<th>RE jobs in 2015 (+42% vs. 2012)</th>
<th>Jobs created per added GW of RE (over 2012-2015)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global + 2.380.000 jobs</td>
<td>Global 8.080.000 jobs</td>
<td>RE technology exporter</td>
</tr>
<tr>
<td>ROW 453.000 (19%)</td>
<td>ROW 2.620.000 (32%)</td>
<td>China 10.000</td>
</tr>
<tr>
<td>USA 157.000 (7%)</td>
<td>Brazil 924.000</td>
<td>Global 5.880</td>
</tr>
<tr>
<td>Europe 3.000 (~ 0%)</td>
<td>Rest of Asia 1.001.000</td>
<td>USA 4.900</td>
</tr>
<tr>
<td>China 1.770.000 (74%)</td>
<td>USA 770.000 (10%)</td>
<td>Europe 4.000 *1</td>
</tr>
<tr>
<td></td>
<td>Europe 1.170.000 (14%)</td>
<td>ROW 3.650</td>
</tr>
<tr>
<td></td>
<td>China 3.520.000 (44%)</td>
<td>Europe 0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RE technology importer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*1 when accounting only for jobs created and not considering job loss</td>
</tr>
</tbody>
</table>

* RE – Renewable Energy
Impact EU is thus losing leadership and represents today less than 15% of jobs in the sector (20% in 2012)

- Poor evolution in RE jobs in EU is due to shake-out of EU PV
- Around 180,000 jobs were lost in PV from 2012 to 2015
- While around 180,000 jobs were created in other RE technologies
- A strong share of these 180,000 jobs are in the upstream part of the value chain
- Opportunity is strong for EU to create jobs in Energy Storage (incl. e-mobility)
- EU must now better support the RE, Energy Storage, Energy efficiency Industries with policies resonating the initial messages from Energy Union

“An innovation-driven transition to a low carbon economy offers great opportunities for growth and jobs ... Technological leadership must be followed by the development of industrial production capabilities or technology supply chains across Europe. This requires bringing together research, industry, the financing sector and public authorities.”
– ENERGY UNION PACKAGE 2015
**Impact** EU-based sector of Advanced Materials for LCE remains vibrant but EU must maintain & develop Industrial Leadership in the field or others will ...

- EU-based Industry of Advanced Materials for LCE energy represents more jobs than any renewable energy (RE) value chain in EU and close to 50% of total EU-based jobs in RE.

- EU-based Industry of Advanced Materials is strongly anchored due to “lower mobility” of industrial production and fact that some Advanced Materials are used in other applications than LCE and also still competitive in supplying markets outside EU (scale and scope effects vs. logistical costs).

- Upstream part of the LCE value chain must therefore be given attention with appropriate energy, industrial and innovation policies to safeguard presence in EU and compete for market leadership positions.

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**EU-based jobs in RE**

**Jobs in Advanced Materials for LCE**

- **Wind power**
- **Solar**
- **BBB** (biomass, biofuels, biogas)
- **Small hydropower**

**Jobs by Source**

- **Direct Jobs**: 41,000
- **Indirect Jobs**: 104,000
- **Total Jobs**: 145,000

EU-based jobs in RE

EU-based jobs in Advanced Materials for LCE
Actions: Policies can contribute to enable further manufacturing of Advanced Materials for LCE in EU

- Energy Union
- Integrated SET Plan

- Horizon 2020 – FP9
- EURICS
- ESIF

- Industrial Policy
- REFIT

- Circular Economy
- Critical Raw Materials

- EIB / EFSI, ESIF

- Horizon 2020 – FP9
- Integrated SET Plan

Access to competence & skills
Actions 3 Strategic Recommendations to maintain leadership of EU-based industry of Advanced Materials for LCE technologies

Our industry is strongly anchored in Europe and serving global markets but to maintain leadership, develop manufacturing presence and innovation power in Europe, we recommend that EU, Member States and Regions:

1. **Stimulate, in frame of Energy Union, a stronger growth of European market for LCE technologies** ... Otherwise the Europe-based sector of advanced materials will not develop local manufacturing presence if growing markets are outside Europe

2. **Focus innovation support on fewer priorities in line with business realities so that industry can develop competitive innovation-driven products** ... Otherwise manufacturing could still happen in Europe but based on innovation from elsewhere

3. **Create a business-friendly environment so that manufacturing in Europe comes at a benefit** ... Otherwise the European markets could become steadily served from outside
**Actions**

What does EU need to do to stimulate production of battery cells in Europe?

- Facilitate investment in EU in production capacity of battery cells based on well-established Li-ion battery technology for e-mobility (EU market growth potential and incentives for manufacturing in EU)
- Asian battery cell producers lead in terms of technology, IP, customer base, ...
- Whether EU should focus on attracting these Asian cell producers and/or incentivize expansion of production capacity of EU-based cell producers remains an open question (actual global supply cannot meet future demand for EVs)
- **Development of EU-based battery cell production (through Asian players attracted to EU or others) will lead to reinforcement and development of EU-based producers of Advanced Materials for batteries**

- As to investment in R&D, **EU must improve funding support for new Li-ion batteries & focus strongly on Advanced Materials** (NMC, LFP, ... in line with industrial realities)
- Funding support should also cover next-generation batteries keeping in mind timeline of any industrial returns
**Action** Innovation is key to Industrial Leadership of EU in Advanced Materials for LCE

- EMIRI supports the development in EU of **policies crucially needed** for the market pull & the technology push (innovation) of low carbon energy technologies to ensure Manufacturing in EU

- EMIRI calls for creation at EU level of an Innovation Pillar bridging the gap between research and market and providing Industry with a stable framework stimulating EU-based innovation

- The Innovation Pillar on Advanced Materials for LCE will reduce innovation risks and accelerate innovation to reach faster and better the market

- The Innovation Pillar should be **based on strong public private interactions**, engage actors along the value chain and build on orientations strongly supported by Industry & Research

- The Innovation Pillar should be developed based on the Industry-Driven Initiative (IDI) proposal produced in collaboration with the EU Commission DG R&I (in line with Integrated SET Plan)

- The IDI promoted by EMIRI is called EMERIT (Energy Materials for Europe – Research & Industry innovating Together), focusses on TRL 4-7 and is limited to max 20 Innovation Topics
Action EMERIT rests upon 4 Key Components featuring max 20 Innovation Topics covering priorities supported by Industry & Research in field of LCE technologies

**KC1** Advanced Materials to increase energy performance of buildings

**KC2** Advanced Materials to make renewable electricity technologies competitive

- Identify clear priorities for industrial growth & jobs in EU-based sector of Advanced Materials for low carbon energy technologies
- And develop a strong presence in Europe of innovation ecosystems and manufacturing value chains
- By innovating with Advanced Materials fit to serve the demanding & growing market of low carbon energy technologies

**KC3** Advanced Materials to enable energy system integration

**KC4** Advanced Materials to enable the decarbonisation of power sector

**Advanced Materials Competences & Infrastructures**
- Incl. Modelling, Testing, Characterization
- Build upon strong European expertise
- Integrate different innovation stakeholders along innovation & value chains
- Empower focus on innovation to reduce risks and accelerate innovation
- Offer spillover effects for other sectors than Energy
**Action** Less is more ... Industry calls for clear focus to reach critical mass & ensure innovation success

### Example of energy system integration – 4 Innovation Topics

<table>
<thead>
<tr>
<th>Topic</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Materials for lower cost, high safety, long cycle life &amp; environmentally friendly electrochemical batteries (Li-ion batteries)</td>
<td></td>
</tr>
<tr>
<td>Advanced Materials for lower cost, high safety, long cycle life &amp; environmentally friendly electrochemical batteries (next generation electrochemical batteries)</td>
<td></td>
</tr>
<tr>
<td>Advanced Materials for lower cost storage of energy in the form of hydrogen or other chemicals (power to gas, power to liquid technologies)</td>
<td></td>
</tr>
<tr>
<td>Advanced Materials to facilitate the integration of storage technologies in the grid</td>
<td></td>
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</tbody>
</table>
**Action** EMERIT IDI contributes significantly to key actions outlined in the “Integrated SET Plan”

<table>
<thead>
<tr>
<th>Action #</th>
<th>Title</th>
<th>Level of contribution of IDI to support action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sustain technological leadership by developing highly performant renewable technologies and their integration in the EU's energy system</td>
<td>VERY HIGH</td>
</tr>
<tr>
<td>2</td>
<td>Reduce the cost of key technologies</td>
<td>VERY HIGH</td>
</tr>
<tr>
<td>3</td>
<td>Create technologies and services for smart homes that provide smart solutions to energy consumers</td>
<td>LOW</td>
</tr>
<tr>
<td>4</td>
<td>Increase the resilience, security and smartness of the energy system</td>
<td>HIGH</td>
</tr>
<tr>
<td>5</td>
<td>Develop new materials and technologies for, and the market uptake of, energy efficiency solutions for buildings</td>
<td>VERY HIGH</td>
</tr>
<tr>
<td>6</td>
<td>Continue efforts to make EU industry less energy intensive and more competitive</td>
<td>LOW</td>
</tr>
<tr>
<td>7</td>
<td>Become competitive in the global battery sector to drive e-mobility forward</td>
<td>HIGH</td>
</tr>
<tr>
<td>8</td>
<td>Strengthen market uptake of renewable fuels needed for sustainable transport solutions</td>
<td>MEDIUM</td>
</tr>
<tr>
<td>9</td>
<td>Step up research and innovation activities on the application of carbon capture and storage (CCS) and the commercial viability of carbon capture and use (CCU)</td>
<td>HIGH</td>
</tr>
<tr>
<td>10</td>
<td>Maintaining a high level of safety of nuclear reactors and associated fuel cycles during operation and decommissioning, while improving their efficiency</td>
<td>NONE</td>
</tr>
</tbody>
</table>
**Impact** Achieving the specific innovation objectives of EMERIT IDI will contribute to ...

1. **Getting the right Advanced Materials faster to the market** by addressing innovation risks (execution, adoption and co-innovation risks)
2. **Accelerating the development & deployment of LCE technologies** enabled by Advanced Materials (contributing to tackle Energy Union Challenges)
3. **Driving competitiveness of industrial sector of Advanced Materials for LCE and maintain / develop Industrial Leadership of EU** (towards 20% of GDP from manufacturing by 2020)
4. **Securing R&D and capital investments of the Industry in EU**
5. **Safeguarding & creating quality jobs in EU for operators, researchers, engineers**

<table>
<thead>
<tr>
<th>The business opportunity</th>
<th>In 2015</th>
<th>In 2025+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenues from operations</td>
<td>~ 30 billion €</td>
<td>~ 45 billion €</td>
</tr>
<tr>
<td>Capital expenditures</td>
<td>~ 2 billion €</td>
<td>~ 3 billion €</td>
</tr>
<tr>
<td>R&amp;D spending</td>
<td>~ 800 million €</td>
<td>~ 1.3 billion €</td>
</tr>
<tr>
<td>Direct jobs</td>
<td>~ 110,000 people</td>
<td>~ 175,000 people</td>
</tr>
<tr>
<td>Researchers in Industry</td>
<td>~ 5,000 people</td>
<td>~ 8,000 people</td>
</tr>
</tbody>
</table>

* Based on < 5% annual market growth rate and partial capture of market growth by European Industry
### TAKE AWAYS

**Advanced Materials are key to tackle climate change, Energy Union and re-industrialization in EU**

<table>
<thead>
<tr>
<th><strong>Environmental Challenge</strong></th>
<th>One of today’s most pressing global environmental challenge is <strong>climate change mitigation</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Technology Challenge</strong></td>
<td><strong>Accelerating transformation of the energy systems towards LCE</strong> is a crucial part of the solution (also offering energy security)</td>
</tr>
<tr>
<td></td>
<td>LCE technologies cover energy performance of buildings, harvesting of renewable energy, energy storage, decarbonization</td>
</tr>
<tr>
<td></td>
<td><strong>Cost of LCE technologies must keep coming down</strong> to ensure adoption &amp; deployment of LCE in Europe and rest of the world</td>
</tr>
<tr>
<td><strong>Innovation Challenge</strong></td>
<td>Advanced Materials accounting for important share of cost of LCE technologies, <strong>innovation in Advanced Materials is needed</strong> to reduce intrinsic cost, increase performance and lifetime of these technologies</td>
</tr>
<tr>
<td><strong>Business Challenge</strong></td>
<td><strong>EU is losing leadership in LCE technologies</strong> and represent today less than 15% of jobs in the sector (China is at 45% and growing)</td>
</tr>
</tbody>
</table>
**TAKE AWAYS (ct’d)**

And this is a Business Opportunity for EU

But EU should act better & faster to capture it ...

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**The business opportunity**

- EU (based on historical industrial strengths) has industrial leadership in Advanced Materials for LCE - This represents 500,000 jobs direct & indirect (close to 50% of EU-based jobs in LCE technologies)

- Policies stimulating market pull & technology push of LCE technologies to ensure manufacturing could lead, by 2025+, to creation of 300,000 jobs in EU-based sector of Advanced Materials

**The way forward**

- To accelerate innovation in Advanced Materials, industry players and research community within EMIRI call for an Innovation Pillar, based on open collaboration between innovation actors

- EMIRI has worked over 2015 in collaboration with EU Commission DG R&I on the creation of the EMERIT Industry-Driven Initiative (IDI) laying the foundations & priorities of the Innovation Pillar

- EMERIT IDI will contribute to reinforcing presence in Europe of a competitive industry impacting economic growth and employment (+50% beyond 2025), safeguarding investments and creating strong innovation ecosystems for the Energy Union

- Up to EU now to reflect this into Horizon 2020 and beyond in terms of ambitious funding support as well as clearly delineated priorities
More on EMIRI ...

Advanced Materials “enabling” energy technologies
EMIRI in a nutshell ...

- EMIRI is an **industry-driven grouping** of over **60 organizations** (established in 2012)
- With a balance of industry players, research organizations, associations
- Across Europe & across Energy Technologies,
- Aiming to be a key player in defining & implementing a **policy for Advanced Materials**
- To promote a strong and vibrant sector of **Advanced Materials for low carbon energy & energy efficiency & restore Industrial Leadership**
- Inspired by the **SET Plan** & supporting **Energy Union**
- Focusing on **innovating & bringing to the market**
  Advanced Materials solutions to contribute to tackling Energy & Economic challenges of EU
Activities of EMIRI since 2013

- Organized and led the input of industry-driven community of Advanced Materials to the SET Plan Integrated Roadmap, NMBP work programme, LCE work programme

- Ensured presence of Industry of Advanced Materials at various EU-endorsed international conferences (Industrial Technologies, EuroNanoForum, SET Plan Conference) to create awareness on key enabling role of Advanced Materials in EU transition to low carbon energy (Energy Union)

- Organized various Brokerage & Ideation Events specifically on Advanced Materials for low carbon energy (open to all and at no cost)

- Participated to EU Commission High-level Group Meetings of Members States on Advanced Materials and Nanotechnologies to constantly provide views of Industry of Advanced Materials for Energy

- Worked with our Industry & Research Members and DG R&I Directorate KETs (and Directorate Energy) to generate the EMERIT (Energy Materials for Europe - Research and Industry innovating Together) Industry-Driven Initiative paving the way for a market-oriented innovation pillar focusing on limited number of priorities all supporting the recent Integrated SET Plan Communication and its 10 key actions
Activities of EMIRI in 2016

- Ensure presence of Industry of Advanced Materials at various EU-endorsed international conferences to create awareness on key enabling role of Advanced Materials in EU transition to low carbon energy (Energy Union)

- Organize various Brokerage & Ideation Events specifically on Advanced Materials for low carbon energy (open to all)

- Continue participation to the EU Commission High-level Group Meetings of Members States on Advanced Materials and Nanotechnologies and contribute to NMBP Advisory Group

- Provide regular strategic input to DG R&I Directorate ENERGY, DG ENERGY and JRC in frame of R&I priorities supporting the 10 Key Actions of the new Integrated SET Plan

- Provide regular strategic input to DG R&I Directorate Industrial Technologies on Advanced Materials for low carbon energy, based on innovation topics of the EMERIT Industry-Driven Initiative

- Advocate for increased attention and support of EU and MS to the needs & realities of the EU-based Industry of Advanced Materials for low carbon energy (EMERIT cPPP or similar ?)
What is the added value of being an EMIRI member

EMIRI members play a pivotal role in shaping the future of advanced materials as a key enabling technology in the European Union.

EMIRI welcomes new members representing all the technologies featured in the SET Plan.

As a member, you will benefit from

- Participating in setting long-term funding priorities in advanced materials for the low-carbon energy & energy efficiency sector

- Being informed about EU and Member States priorities and funding opportunities

- Enhancing your visibility towards European and national policymakers

- Joining a proactive, motivated network of potential future consortium partners - leading industrial players, SMEs, research institutes, universities, trade associations and technology platforms

More on EMIRI at www.emiri.eu
Or by reaching out to fabrice.stassin@emiri.eu