



BASF Battery Materials – eMobility Materials

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Kwo Young
Kwo.young@BASF.com



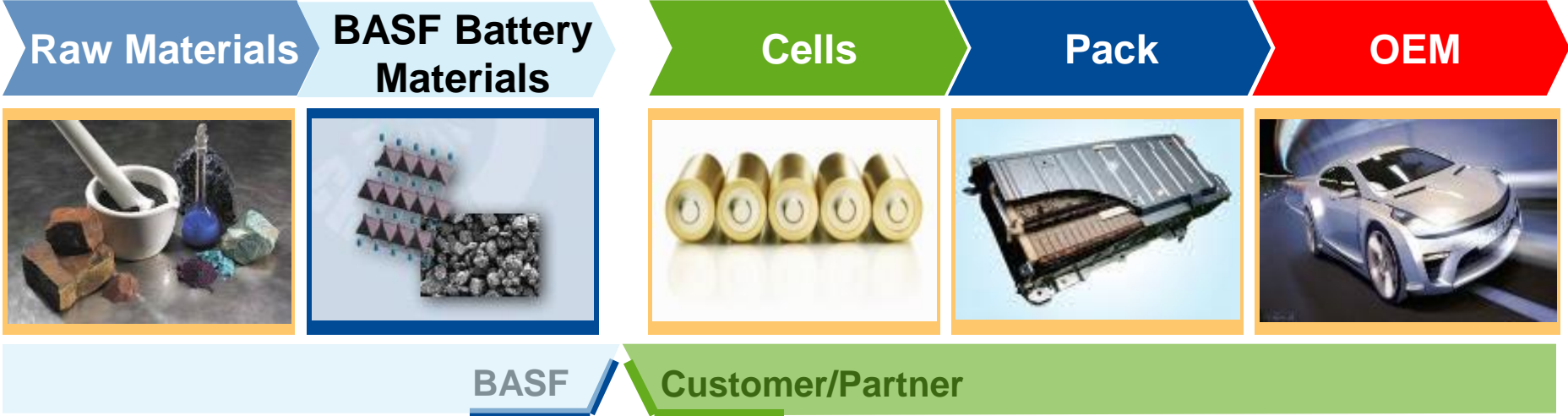
BASF – We Create Chemistry for a Sustainable Future

- Our chemistry is used in almost all industries
- We combine economic success, social responsibility and environmental protection
- Sales 2015: €70,449 million
- EBIT 2015: €6,248 million
- Employees (as of December 31, 2015): 112,435
- 6 Verbund sites and 338 other production sites



BASF Battery Materials

Leveraging core competency



- The battery determines characteristics of an electric vehicle
Range, costs, safety
- The battery allows for differentiation and value creation
Challenging technology and chance for chemistry/engineering/OEMs
- Materials are the heart of the battery cell and significantly improve performance
Chemistry plays a central role as material and component supplier

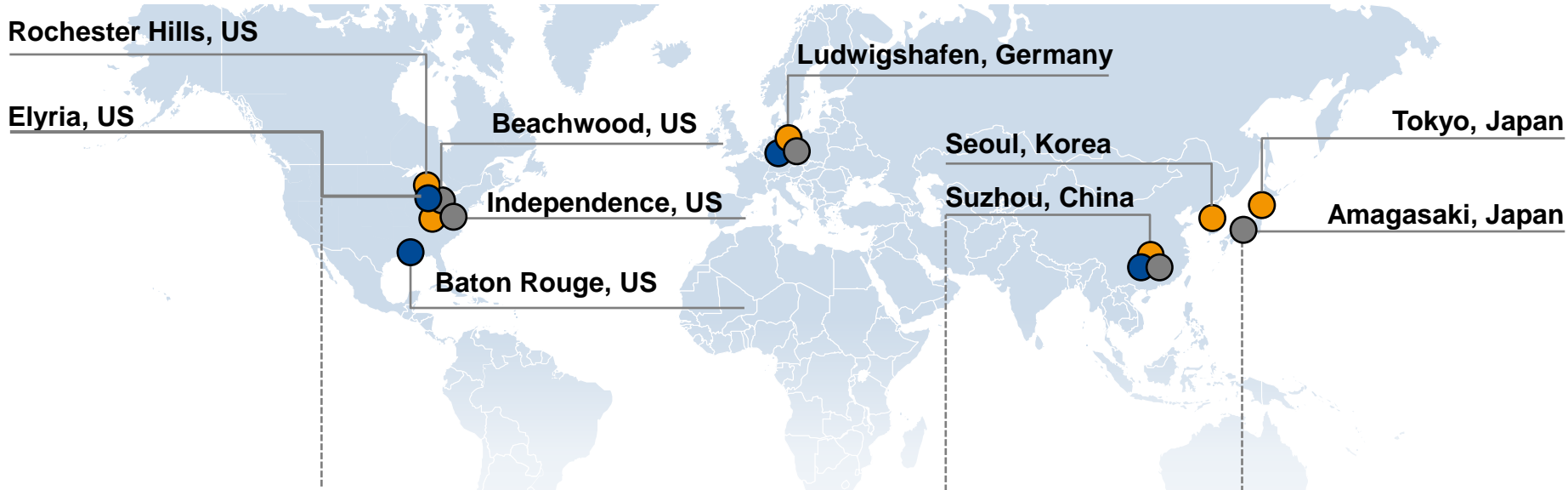
BASF Battery Materials – Position in the Industry Landscape

- Batteries in cars will increase the efficiency of transportation and reduce emissions (VOC, NO_x, PM, and CO₂)
- The necessary innovations for batteries will be enabled by the chemical industry
- BASF is committed to serve the industry with materials, innovation and technology
- BASF is a Supplier of Materials and Components to the Battery Industry
- BASF is covering a broad range of battery technologies including NiMH and next generation battery system components



BASF: Strong Global footprint

Expanding as BASF Toda joins global network



NCM production



Largest NCM production plant of the US (2.4 kt): *Elyria*

Electrolyte production



Production capacity: *Suzhou, China*
 Further capacity: *Louisiana, US*

Application labs, research centers



Amagasaki, Japan

Further application labs: *US, China, Germany*
 Research centers: *US, Germany*

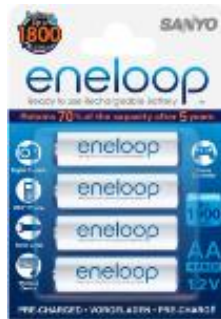


- Sales Office
- Production
- R&D/Application Technology Center

BASF Battery Materials – NiMH

Inventor and Licensor of NiMH Technology
Fundamental Worldwide Patent Position

- 74 US patents
- Worldwide counterparts
- 3rd party recognition of patent value
- 40 licensees: www.catalysts.basf.com/NiMH-licenses

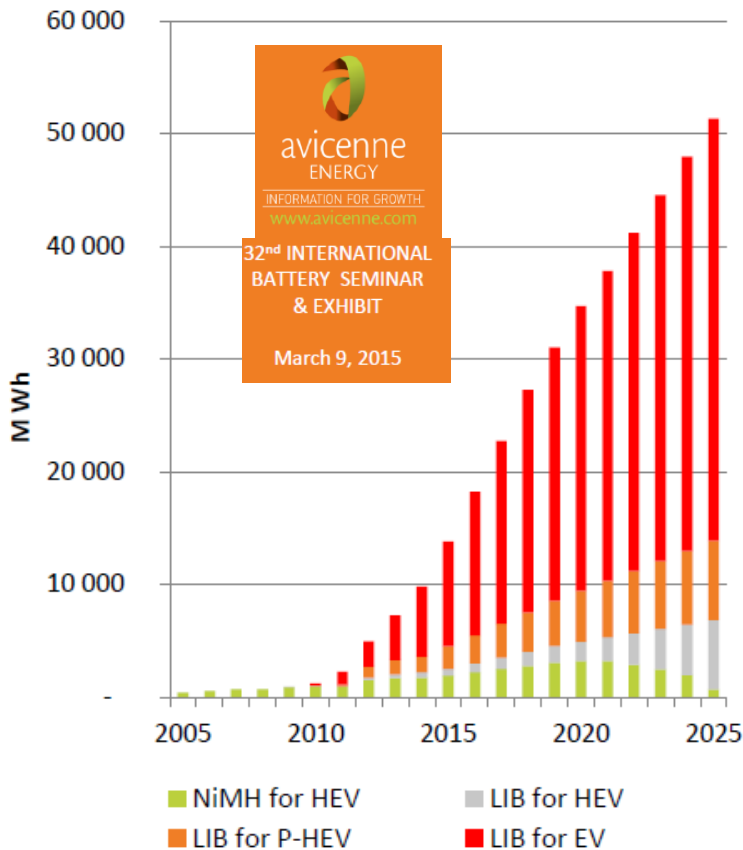


Rechargeable NiMH replacement of Primary Alkaline

BASF Battery Materials – NiMH

Commercial Hybrids use NiMH

Exceptional Track Record of Success



- Over 10 million hybrids sold with NiMH
- Proven safety, life, reliability and cost
- NiMH – “Life of the Car”

“The hybrid batteries used in Toyota and Lexus models can last longer the vehicles themselves, so often they are only recovered when the cars reach the end of their useful life, or if they have been involved in an accident.”

Battery collection and recycle more than 90%, targeting 100%.

Hybridcars.com February 9, 2015



We create chemistry