Session vormittags um 10:00 – 12:00 Uhr, Session nachmittags um 14:30 – 17:00 Uhr Das ausführliche Vortragsprogramm finden Sie unter **www.achema.de/kongress und in der App**.

ļ	Raum	Frequenz 1	Frequenz 2	Granat	Korall	Karmesin	Symmetrie 2	Symmetrie 3	Encounter	Europa	Consens	Entente
t t	Halle	Portalhaus Via	Portalhaus Via		11.0		8.1	8.1	5.0	4.0	4.C	4.C
[]	Thema				#hydrogen: Transport and storage	Safety and	#process: Process engineering	s #process: Process engineering	s #green: Circular economy		#process: Process engineering	s #green: Indu biotech
littag	Session-				storage Properties of materials for	security New options	Enhancing plant	Smart multiphase			Standardized	Industrial
Vormittag	Titel				materials for hydrogen appli- cations	in preventing incidents in the process industry	productivity by intelligent detail engineering	processes	economy of plastics I		method for equip- ment performance assessment in	biotechnolo Producing fo and process
					cations	processing	engineering				fouling-prone applications	side stream:
Þ	13:00 – 14:00 Uhr			Hall	e 4.0, Saal Europa:	: #pharma: Highlig	ht Session "Next r	generation pharma	a manufacturing –	Current advances i		erapy"
Þ	Thema	#lab: Imaging and		#digital: Process industry	#hydrogen: Transport and	#process: Materials	#process: Process engineering		#green: Circular economy		#process: Process engineering	
mittag		Imaging and sensing			Transport and storage	Materials and material processing	engineering	Circular economy	Circular ecolo		engineering	bloteen
Nachmittag	Session- Titel	New measurement techniques of		of plants and	Safety for hydro- gen applications	Analytics and optimization in	New advances in sensor technology	y of Carbon Capture	Towards a circular economy of		Heat integration in process industry	biotechnolo
Nac		nanoparticles and online process		processes	Senapp	materials and ma- terial processing		and Utilisation (CCU) in the chem-	plastics II		through me- chanical vapour	 Establishin and scaling-
Ľ	'	control						ical sector			recompression – WindaB	production
[_'	17:00 Uhr				Halle 4.0, Saal Ei	uropa: ACHEMA Op	ening "New glob a	oal framework condi	itions: How is the	process industry p	ositioning itself?"	
	Thema		#digital:	#digital:	#digital:	#digital:	#process: Process		#green: Climate-	#hydrogen:	#green: Sustainability in	#hydrogen:
l m			AI and data analytics	Process industry transformation	Process industry transformation	Modular production	engineering	Informations- plattform	neutral production	n (Global) Ecosystem	production	Water-for-X
Vormittag	Session- Titel		AI-based sensing and control	technologies in		Flow chemistry and modular	New developments	Informations- plattform für Inge-		Operation of hydrogen	Best practise and challenges	Water-for-X: for sustaina PtX
Vor					Data Management Integration		for chemical processes	nieure in der Produktion (in	CCU strategies and plasma	production plants	of corporate sustainability	PtX
Ľ	· · · · · ·				Congress 3.0 I			German only)	applications		reporting in the process industry	
$\lfloor \cdot \rangle$	13:00 – 14:00 Uhr							t Session "Hypersca		urning strategy in	to reality"	
		minituarised,	Al and data		#digital: Process industry	Materials	#process: Process engineering	s #digital: Modular production	#green: Climate- neutral production		#process: Electrified and	#process: Sustainable
tag		automated	analytics		transformation	and material processing				hyperscaling	flexible	production systems
Nachmittag	Session- Titel	technologies –	AI-based modelling and		PIDMIC 3.0 – Process Industry	Surfaces and corrosion	New advances in process	Modularisation in chemical,	Carbon management	Optimizing electrolyzer	Electrifiying chemical	GeCats – Va of catalysis
Nac		Automation, augmented reality	engineering	in the chemical industry –	Data Management Integration	in materials and material	engineering	pharma and bio production	management strategies for the industry	operation	processes	research
1		and sustainability in the laboratory sector		Achievements, challenges and outlook	Congress 3.0 II	processing						
	Thema	#lab: Digitalised,	#digital:	#digital:	#digital:		#process: Smart	#process: Process		#green:	#process:	#green:
		minituarised, automated	Al and data analytics	Process industry transformation	Process industry transformation	Materials and material	engineering and operations	engineering	neutral production	n New materials for sustainability	Mixing and separation	Industrial w
lag		Innovations in	Al to foster the	Digitalization and	PIDMIC 3.0 –	processing Innovative	PAT for energy	Flow Chemistry	Reaching	Sustainable	Membranes and	Challenges
Vormittag	Titel	automated pro-	potential of process data	manufacturing ex-	Process Industry Data Management	applications of	efficiency	Symposium I	emission targets – Industrial examples of GHG	materials from	membrane pro- cesses – Import-	industrial w managemer
		optimization in laboratory and biotechnology			Integration Congress 3.0 III				examples of GHG reduction I	rived feedstocks	ant contribution to energy efficiency and environmen-	
	1	biotechnology									and environmen- tal protection I	
	13:00 - 14:00 Uhr				Halle 4.0, Saa	al Europa: #digital:	Highlight Session	n "Artificial intellige	ence and autonom	ous systems in pro	ocess industry"	
		#digital: AI and data			#digital:	#process: Safety and	#process: Smart	ĭ	s #green: Climate- neutral production	#green: Industrial		#process: Electrified a
		Al and data analytics				security	Smart engineering and operations	engineering	neutral products	Diotech	separation	flexible
nittag	Session- Titel	Al-assisted opera- tion support		(Digital) Standards and	PIDMIC 3.0 – Process Industry	Development of	Harvesting PAT	Flow Chemistry Symposium II	Reaching emission targets	Novel biological production	Membranes and membrane pro-	GeCats – El ing catalysi
Nachmittag	liter	tion support		trends in process industries	Process Industry Data Management Integration	improved devices and components enabling highest safety levels	data	Symposium	emission targets – Industrial examples of GHG reduction II	systems and	cesses – Import-	
2					Congress 3.0 IV	safety levels			reduction II	products – Sus- tainable solutions from biological engineering	energy efficiency and environmen- tal protection II	
Ľ	'									engineening	tal protection II	
Ē		#lab: Imaging and		#digital: Process industry	#digital: Autonomous	#process: Safety and	#process: Plant design and	#process: Process	s #process: Mixing and separation	#green: Climate- neutral production	#green: 1 Circular economy	#green: Clin
		Imaging and sensing		transformation	systems	security	maintenance	engineering				
Vormittag	Session- Titel	Sensing for circu- lar economy			tems in site and	Insights for safety – Challenges to- day and tomorrow	 Mixers, seals, 	n Flow Chemistry Symposium III	Innovative mixing and separation solutions	Climate neutral production – Carbon Capture	Circular economy solutions for inor- ganic materials	Greenhous reduction in basic mate
Vorn				and autonomous operations	plant operations	day and tomorrow	valves and heat exchangers		solutions	Carbon Capture	ganic materiato	basic mater industry (KlimPro Inc
1												
de la concentra de	13:00 -			Halle 4	Seel Europa: #gr	Highlight Ses		Il fuele - Explorin	It amative carbo	oursee for a su	Linchle chemica	Lindustry"
<u>/</u> _'	14:00 Uhr Thema	#lab:		#digital:			#process:	sil fuels – Exploring #process: Process	s #green:	#green: Climate-	#green:	#process: F
		Imaging and sensing		Process industry transformation	production	Safety and	Plant design and maintenance	engineering	Circular economy	neutral production	Sustainability in production	engineerin
ttag	Soccion	Concepts and challenges for		Design and use of a Digital twin		Latest develop- ments in using	Digital tools for predictive	Flow Chemistry Symposium IV	Extraction pro- cesses for metals	Climate neutral production –	Concepts and examples of	GeCats – Fr catalysis to
Nachmittag		instrumental odor monitoring				resources ade- quately for safety	maintenance and environmental		recovery	Enabling CCU pathways	carbon footprint assessment in the process industry	process
Na I		systems				 Performing effi- cient and effective safety studies and 	targets				process industry	
						safety design						
<u> </u>	· · · · · · · · · · · · · · · · · · ·											
'	Thema	#lab: Link with produc- tion and quality		#digital: Process industry transformation		#process: Safety and security			#green: Circular economy		#green: Circular economy	
ttag		From research to		Advanced process		Best practice.			Sourcing and re-		Critical raw	
Vormittag	Titel	production with intelligent exper- iment design and		optimization and control		classifications and models to increase process			cycling of battery raw materials and acids		materials from alternative sourc- es for industrial	
>,		iment design and automation				increase process safety			acids		application – By EU funded project	
٦ I	•										Sea4Value	
Vormittag	12:00 -											

Öffnungszeiten für Besucher: Montag – Donnerstag: 9:00 – 18:00 Uhr, Freitag 9:00 – 16:00 Uhr

ACHEMA2024

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Alliance	Concorde	Facette	Kontrast	Max-Buchner- Hörsaal	Bühne	Lab Innovation Stage	Siemens Digital Innovation Stage	GEA Process Innovation Stage		Siemens Hydrogen Innovation Stage	Zeta Pharma Innovation Stage	Events
4.C #hydrogen: Production and hyperscaling Analysis and controlling for hydrogen technol- ogies	4.C #hydrogen: PX processes and applications Chances and challenges of Power-to-X in Ar- gentina, Morocco and South Africa	3.Via #pharma: ATMP equipment and processes Manufacturing advanced (bio) pharmaceuticals I	3.Via	DECHEMA-Haus	Halle Thema 1 Thema 2	12.0, B35 #lab: Sustainable facilities and operations #lab: Sustainable facilities and operations	11.0, E43 #digital: Process industry transformation #digital: Process industry transformation	9.0, F77 #process: Safety and security #process: Electrified and flexible	6.0, D20 #green: Climate-neutral production #green: Climate-neutral production	6.0, D76 #hydrogen: Transport and storage #hydrogen: (Global) Ecosystem	4.1, B61 #pharma: Supply chain and logistics #pharma: Supply chain and logistics	9:00 Uhr AIRA-Roboter- Challenge Halle 11.1, Stand A5 (ganztägig) 10:00 Uhr The SEFA Theatre Halle 12.0, Stand E70 11:00 Uhr Automation im Dialog Halle 11.0, Stand A43
#hydrogen: Production and hyperscaling Alternative	#hydrogen: PtX processes and applications Kopernikus P2X	#pharma: ATMP equipment and processes Manufacturing			Thema 1	#lab: Sustainable facilities and operations	#digital: Process industry transformation	#process: Mixing and separation	#green: Climate-neutral production	#hydrogen: (Global) Ecosystem	#pharma: On the road to pharma 5.0?	17:30 Uhr ACHEMA Happy Hour Agora & Freigelände 2
feedstocks and hydrogen carriers	 Exploration, validation and implementation of Power-to-X concepts 	advanced (bio) pharmaceuticals II			Thema 2	#lab: Advanced bioanalytics and pharma	#digital: Modular production	#process: Process engineering	#green: Climate-neutral production	#hydrogen: PtX processes and applications	#pharma: Biopharma production	
#process: International Powder and Nanotechnology Forum 2024	#hydrogen: Transport and storage Hydrogen flagship project TransHyDE – Implementing hydrogen	#pharma: Biopharma production PAT in (bio) pharmaceutical production	#green: Climate- neutral production Electrochemical Synthesis of Biogenic Platform Chemicals -	#process: Safety and security ISSA Symposium – Hazardous substances in maintenance watch cite and	Thema 1 Thema 2	#lab: Digitalised, minituarised, automated #lab: Digitalised, minituarised,	#digital: Modular production #digital: Al and data	#process: Sustainable production systems #process: Sustainable	#green: Sustainability in production #green: Sustainability	#hydrogen: Production and hyperscaling #hydrogen: Production and	pharma 5.0? #pharma: On the road to	9:00 Uhr, AIRA-Roboter- Challenge Halle 11.1, Stand A5 (ganztägig) 10:00 Uhr The SEFA Theatre Halle 12.0, Stand E70
#process:	#hydrogen: Transport and storage	#green: Industrial water	ElectroSyn #green: Circular economy	works: risks and prevention I #process: Safety and security	Thema 1	minituarised, automated #lab: Digitalised, minituarised, automated	analytics #digital: Al and data analytics	production systems #process: Sustainable production systems	in production #green: Sustainability in production	hyperscaling #hydrogen: Production and hyperscaling	pharma 5.0? #pharma: On the road to pharma 5.0?	11:00 Uhr Automation im Dialog Halle 11.0, Stand A43 16:00 Uhr, India Day Portalhaus, Ebene 1, Transparenz 1 17:15 Uhr Japanese Reception Halle 4.C, Alliance
International Powder and Nanotechnology Forum 2024	Hydrogen flagship project TransHyDE – Aspects of using hydrogen	Water management in the pharmaceutical industry	Monomer Recycling of PET and polyester textiles	ISSA Symposium – Hazardous substances in maintenance works: risks and prevention II	Thema 2	#lab: Link with production and quality	#digital: Al and data analytics	#process: Smart engineering and operations	#green: Circular economy	#hydrogen: (Global) Ecosystem	#pharma: Biopharma production	17:30 Uhr ACHEMA Happy Hour, Agora & Freigelände 2 19:00 Uhr Frankfurter Abend im Römer (gesonderte Einladung)
#pharma: International Powder and Nanotechnology Forum 2024	 #hydrogen: Production and hyperscaling H2Mare – De- central offshore hydrogen and its derivatives 	#pharma: Biopharma production Single-use technologies for biopharmaceutical production		#process: Safety and security ISSA Symposium – Hazardous substances in maintenance works: risks and prevention III	Thema 1 Thema 2	#lab: Digitalised, minituarised, automated #lab: Digitalised, minituarised,	#digital: Modular production #digital: Modular production	#process: Process engineering #process: Food processing and	#green: Circular economy #start-up: Start-up slam	#hydrogen: (Global) Ecosystem #hydrogen: Transport and Storage	#pharma: On the road to pharma 5.0? #pharma: Biopharma production	9:00 Uhr AIRA-Roboter- Challenge Halle 11.1, Stand A5 (ganztägig) 10:00 Uhr The SEFA Theatre Halle 12.0, Stand E70 11:00 Uhr
#pharma:	neutral production	production			Thema 1	automated #lab: Link with production and quality	#digital: Process industry transformation	technology #process: Sustainable production systems	#start-up: Start-up Award	#hydrogen: Production and hyperscaling	#pharma: ATMP equipment & processes	Automation im Dialog Halle 11.0, Stand A43 11.00 Uhr/15:00 Uhr Schülerveranstaltungen Portalhaus, Ebene 1, Transparenz 1 17:00 Uhr Verleihung des ACHEMA-
International Powder and Nanotechnology Forum 2024	Engaging industri- al transformation in NW Europe – 3C-Vacs	Sterile (bio) pharmaceutical manufacturing			Thema 2	#lab: Sustainable facilities and operations	#digital: Modular production	#process: Safety and security	#start-up: Start-up Award	#hydrogen: Transport and storage	#pharma: Sustainable production & packaging	Gründerpreises Halle 6.0, EY Green Innovation Stage 17:30 Uhr ACHEMA Happy Hour Agora & Freigelände 2
#green: Circular economy Bridging ecologic solutions with economic science and chemistry –		and logistics Tracing, tracking, and packaging in			Thema 1	#lab: Digitalised, minituarised, automated #lab:	#digital: Process industry transformation #digital:	#process: Electrified and flexible #process:	#green: Climate-neutral production #green:	#hydrogen: (Global) Ecosystem #hydrogen:	#pharma: On the road to pharma 5.0? #pharma:	9:00 Uhr AIRA-Roboter- Challenge Halle 11.1, Stand A5 (ganztägig) 10:00 Uhr The SEFA Theatre Halle 12.0,
Biotechnology in a circular economy	optimization					Digitalised, minituarised, automated	Process industry transformation	Smart engineering and operations	Industrial biotech	Production and hyperscaling	Sustainable production & packaging	Stand E70 10:00 Uhr Career Day Foyer 5.1/6.1 11:00 Uhr Automation
#green: Circular economy Bridging ecologic solutions with economic science and chemistry – End of life	#hydrogen: PtX processes and applications Advancements in material optimi- zation for various Power-to-X-pro- cresses	#pharma: Supply chain and logistics Cooling and freezing in bio- pharmaceutical production		#green: Climate- neutral production	Thema 1 Thema 2	Advanced bioanalytics and pharma #lab:	#digital: Process industry transformation #digital: Process	#process: Safety and security #process: Food	#green: Industrial biotech #green: Industrial	#hydrogen:	production #pharma:	im Dialog Halle 11.0, Stand A43 13:30 Uhr DECHEMAX- Preisverleihung Halle 6.0, EY Green Innovation
– End of life solutions to close the loop	cesses #hydrogen:	#pharma:		process industry – A bioeconomy workshop	Thema 1	Link with production and quality #lab:	Process industry transformation #digital:	Food processing and technology #process:	Industrial biotech #green:	Transport and storage #hydrogen:	Biopharma production #pharma:	Stage 18:00 Uhr ACHEMA-Party Forum (für Aussteller und Presse) 9:00 Uhr
	PtX processes and applications Innovations in bio- based Power-to-X and renewable	Supply chain and logistics			Thema 2	Sustainable facilities and operations	#digital: Process industry transformation #digital: Process industry transformation	#process: Food processing and technology #process: Process engineering		#hydrogen: Production and hyperscaling #hydrogen: PtX processes and applications	On the road to pharma 5.0? #pharma:	AilA-Roboter- Challenge Halle 11.1, Stand A5 (ganztägig) 11:00 Uhr Automation im Dialog Halle 11.0, Stand A43 11:00 Uhr Schülerveranstaltungen Portalhaus, Ebene 1, Transparenz 1