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Herman Rutner,
Biotech Consultant,
ACS member for 53 years strong!

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Blog Posts by Paul on Industry Voices
- What are the best renewable green solutions for our industry?
- Let me hear from you!
- Would a Philae-allergen deal spell bad news for the industry?
- Staying Warm through the "China Chill": Threat of Winter allows petrochemical industry to spring forth new business models
- Commodities Bubble: Oil in Trouble: Chinese Economic Slowdown Could Mean a "Crude" Awakening for the Petrochem industry
- Buy Now Home: Chemists need jobs!
- US Fiscal Fuel Surplus: PRO Oil against Coal and Gas for Market Share

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“2017 Global Outlook: Chemistry and the Economy”

Willam Carroll
Adjunct Professor of Chemistry, Indiana University
Past President and Former Chair of the Board, ACS

Paul Hodges
Chairman, International eChem

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2017 OUTLOOK

THE GREAT RECKONING BEGINS

“There are none so blind, as those that will not see. The most deluded people are those who choose to ignore what they already know.”

8 December 2016

The pH Report

About IeC: International eChem (IeC) is a London-based strategy consultancy advising Fortune 500 and FTSE 100 companies, investment banks and fund managers.

Paul Hodges is a trusted adviser to major companies and the investment community, and has a proven track record of accurately identifying key trends in global marketplaces. He has been widely recognised for correctly forewarning of the 2008 global financial crisis.

He is co-author of the influential ebook "Boom, Gloom and the New Normal", and his analysis of the key role of demographics in driving the global economy is now attracting increasing attention from senior policymakers and executives.

Paul is Chairman of IeC, non-executive Chairman of NiTech Solutions and non-executive director of Recycling Technologies. Prior to launching IeC in 1995, Paul spent 17 years with Imperial Chemical Industries (ICI), both in England and the USA, where he held senior executive positions in petrochemicals and chloralkali, and was Executive Director of a $1 billion ICI business.

Paul serves as a Global Expert with the World Economic Forum, and is a Member of the Energy Institute and a Freeman of the City of London. He is a graduate of the University of York, and subsequently studied with the IMD business school in Switzerland.
AGENDA

- Impact of ageing populations on consumer demand
- The Great Reckoning begins – Brexit, Trump

VACCINATION, DISINFECTION, PHARMA AND NOW HEALTHIER LIFESTYLES HAVE CHANGED OUR LIVES

Dr Edward Jenner, 14 May 1796
1st smallpox vaccination

SOURCE: pH REPORT, ANGUS MACDONALD, OECD
DRAMATIC CHANGE IS UNDERWAY IN THE COMPOSITION OF THE US POPULATION

“REALITY FOR THE AVERAGE AMERICAN FAMILY IS THAT ITS HOUSEHOLD INCOME IS $4K LESS THAN WHEN BILL CLINTON LEFT OFFICE”
PRESIDENT OBAMA, 1 MAY 2016
U.S. HOUSEHOLD SPENDING DECLINES AFTER AGE 55

GLOBAL GDP FELL RECORD $4.4tn IN 2015, WORLD TRADE FELL 13.8%
ACC’s CAPACITY UTILISATION INDEX IS THE BEST LEADING INDICATOR FOR THE GLOBAL ECONOMY

CAPACITY UTILISATION HAS BEEN FALLING FOR 12 MONTHS, AND IS NOW CLOSE TO 2009’S LOW
THE MEDIAN OIL PRICE HAS BEEN $23/BBL SINCE 1861

CRUDE OIL PRICES IN $2016 1861 - 2016 (to date)

AGENDA

- Impact of ageing populations on consumer demand
- The Great Reckoning begins – Brexit, Trump
How will the economy do under a Trump Presidency?

- It will do much better than it is right now.
- It will do marginally better than it is right now.
- It will stay about the same.
- It will do marginally worse than it is right now.
- It will do much worse than it is right now.

BREXIT, TRUMP WINS CONFIRMS GREAT RECKONING’ FOR STIMULUS POLICY FAILURES IS UNDERWAY
PRESIDENT-ELECT TRUMP’S GETTYSBURG SPEECH

“What follows is my 100-day action plan to Make America Great Again. It is a contract between myself and the American voter — and begins with restoring honesty, accountability and change to Washington.”

FIRST, I will announce my intention to renegotiate NAFTA or withdraw from the deal under Article 2205
SECOND, I will announce our withdrawal from the Trans-Pacific Partnership
THIRD, I will direct my Secretary of the Treasury to label China a currency manipulator
FOURTH, I will direct the Secretary of Commerce and U.S. Trade Representative to identify all foreign trading abuses that unfairly impact American workers and direct them to use every tool under American and international law to end those abuses immediately
FIFTH, I will lift the restrictions on the production of 550 trillion dollars’ worth of job-producing American energy reserves, including shale, oil, natural gas and clean coal.
SIXTH, lift the Obama-Clinton roadblocks and allow vital energy infrastructure projects, like the Keystone Pipeline, to move forward
SEVENTH, cancel billions in payments to U.N. climate change programs and use the money to fix America’s water and environmental infrastructure 22 October 2016

TRUMP’S ECONOMIC AGENDA IS POWERFUL, BUT HEADING IN THE WRONG DIRECTION

“When the middle class are anxious about their economic realities in their future, it’s easy to get trapped in demagoguery and protectionism.” Justin Trudeau, Canadian premier

“In an email on Friday, Mr. Navarro, the Trump transition team’s economic adviser, said that imposing steep tariffs on China was an essential step to begin to address the American trade deficit with China, which reached $365 billion last year. He blamed Chinese trade practices for “destroying entire industries, hollowing out entire communities” and “putting millions out of work.” But Mr. Navarro also cast the threat of tariffs as an opening gambit in a refashioning of trade positions.

“Tariffs are not an end game but merely one of several negotiating tools to bring our trade back into balance,” he said, adding that Mr. Trump’s administration would do so “in a measured way.”

“Mr. Navarro’s co-author, Greg Autry, a professor at the University of Southern California, said he assumed the Trump camp was dead serious about its threats to impose tariffs on China. The goal is to force manufacturers to come back to the United States as a condition of selling into the American market.

“A full-on trade war between the world’s two largest economies would cost American jobs in the immediate term, Mr. Autry said, but eventually millions of new ones would be created as the United States again hummed with factory work.”
THE FUTURE OF US EMPLOYMENT LIES IN SERVICES, NOT MANUFACTURING

Employment structure during economic development

---

THE SHARING ECONOMY IS DRIVING A SHIFT TOWARDS SERVICES

The Boomers owned “stuff” when younger, but now they and Millennials are happy to share

---
SUSTAINABILITY IS REPLACING GLOBALISATION AS A KEY DRIVER FOR THE ECONOMY

Only 5% of plastic packaging is retained for future use – the oceans contain 150Mt of plastics

ADJUSTING TO TODAY’S NEW DEMOGRAPHIC REALITY

BOB FARRELL’S MODEL OF FINANCIAL CRISES: ELISABETH KÜBLER-ROSS’ PARADIGM OF LOSS MODEL

2008 - 2009

DENIAL
Stimulus policies
‘Things will soon return to Normal’

ANGER
Downturn becomes obvious
‘The triumph of the Populists’

BARGAINING
Focus on what we can control
‘Simple solutions to a complex problem’

2015 - 2020?

DEPRESSION
Reality begins to be confronted
‘Awareness of what has been lost’

2021 - 2025?

ACCEPTANCE
Finally people accept what has happened
New settlement emerges out of extreme pessimism

The pH Report
THE NEW NORMAL WORLD HAS A WIDE RANGE OF NEW OPPORTUNITIES

MOBILITY
The sharing economy

SHELTER
Energy efficient

HEALTH
Digital healthcare

WATER
Clean water and sanitation

FOOD
Intelligent and reusable packaging

SUSTAINABLE

AFFORDABLE

Which of the New Normal opportunities will be achieved with the most success?

- Mobility – the sharing economy
- Shelter – energy efficient
- Water – clean water and sanitation
- Food - intelligent and reusable packaging
- Health – digital healthcare
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- Should we buy heating or cooling?
- Is the rise of demand from China a threat or an opportunity?
- Commodity Bubble: Oil in Trouble: How to protect the economic slowdown?
- The Middle East "Crude" Awakening for the Petrochemical Industry
- Buy Now, Hedges: Chemists need jobs!
- US Fiscal Fuel Surplus: Why Oil against Coal and Gas for Market Share

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Chad is known for his discovery and development of spherical nucleic acid (SNA) and many contributions to nanobiomedicine, nanolithography, supramolecular chemistry, and nanoparticle synthesis

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FROM ACADEMIC DISCOVERY TO A COMMERCIAL DESKTOP FAB

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