



# ***A Vision for Energetics***

## ***...Current and Future***

***2011 National Capitol Region Energetics Symposium***

2 November 2011

Bob Kavetsky

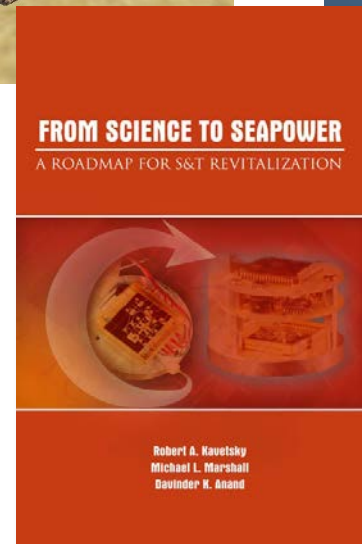
President & Executive Director, ETC

# Major Activities

- Technology Applications
- Policy and strategic planning
- Workforce Development



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...Helping to bring science & technology to Southern Maryland

# My Theme for Today



***The World is Changing ... The Energetics Community MUST be Ready!!***

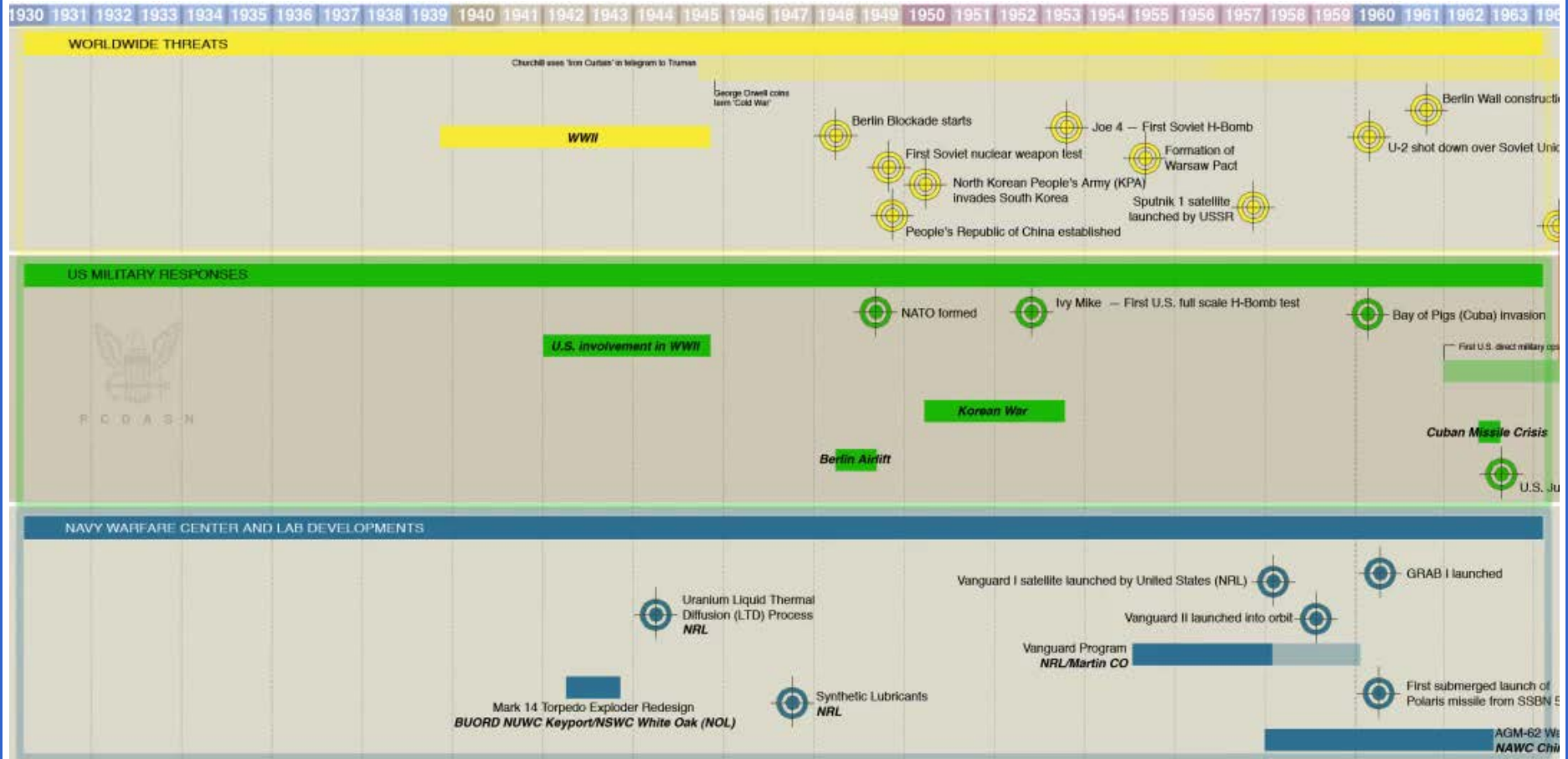
# The Current State of Energetics

- There is a strong advocacy chain in place at the national level for energetics which is almost without precedent
- There is a compelling historical story to tell, and we all need to start telling it!
- We need to have a more robust level of global insight into energetic matters



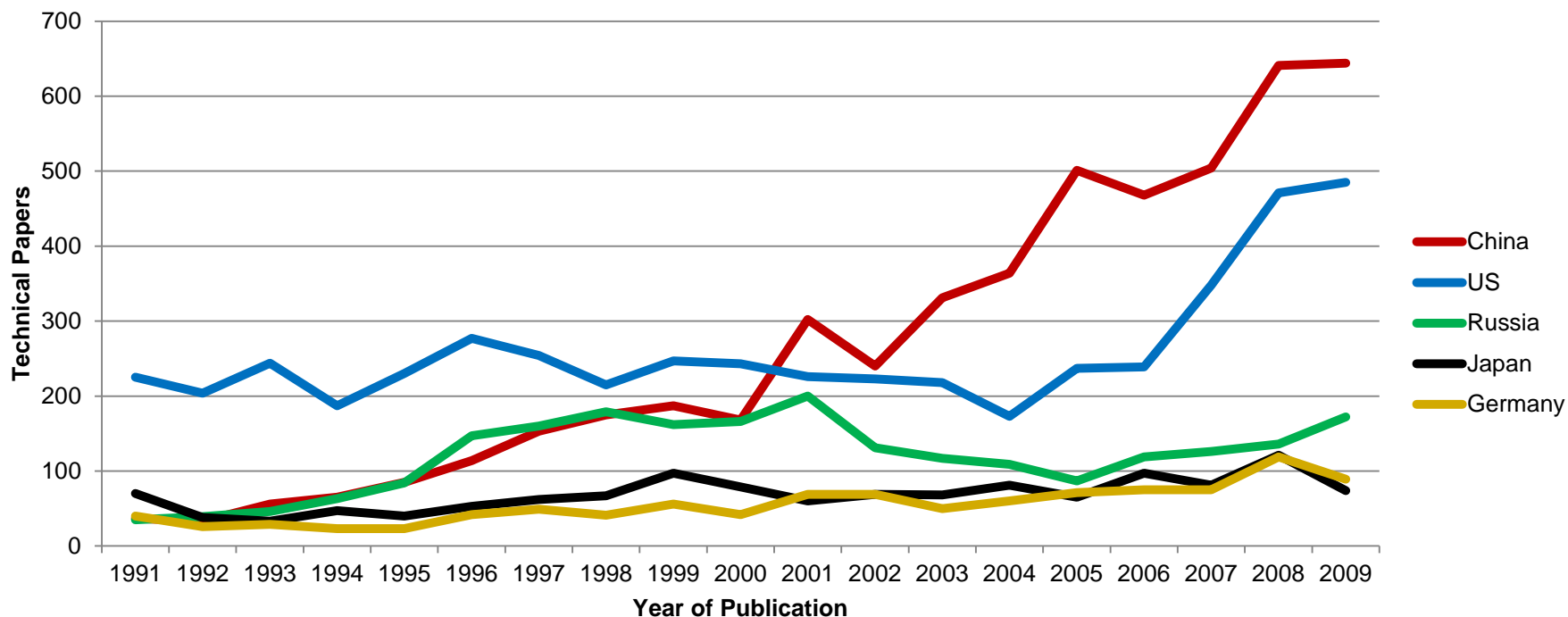


# Telling the Energetics Story



# Energetics Informatics

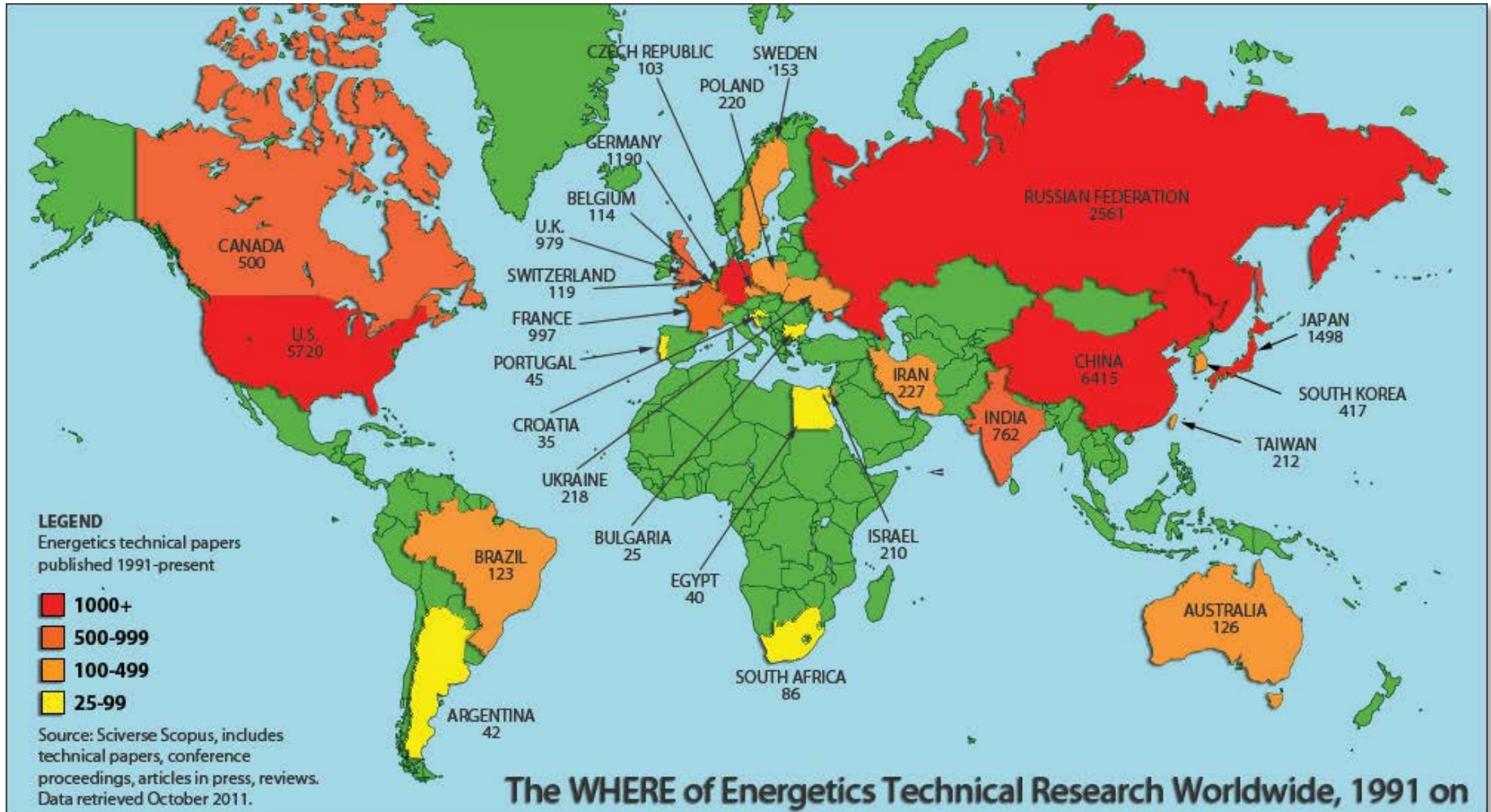
## Published energetic materials technical research by country 1991-2009



*(SciVerse Scopus, keyword search results including all categories, retrieved October 2011)*

**Information Is The Fastest Growing Commodity  
On This Planet**

# Energetics Informatics





# The Future State of Energetics

## *Old Paradigm*

- Mix, test, decipher
- Simple performance metrics (e.g. shock wave energy)
- Benign operational environments
- Off the shelf “menu”
- 20 - 30 year development timeline from first synthesis of a new ingredient to IOC



## *New Paradigm*

- Physics-based models drive explosives formulation and manufacture
- Metrics derived from warhead performance requirement
- Complex/harsh environments
- “Tailored” Energetic Materials/ Explosives “on demand”
- Accelerated development timeline using new energetic materials and processes

# Summary

The future state of energetics MUST include - A robust energetics community, creating products and information which help shape our national security posture

Let's collectively define our future, rather than have the future define us!!