

**1001 INVENTIONS: THE ENDURING LEGACY OF MUSLIM CIVILIZATION**

*"If there is much misunderstanding in the West about the nature of Islam, there is also much ignorance about the debt our own culture and civilization owe to the Islamic world." — HRH Prince Charles*

WASHINGTON (Jan. 19, 2012)—Modern society owes a tremendous amount to the Muslim world for the many groundbreaking scientific and technological advances that were pioneered during the Golden Age of Muslim civilization between the seventh and 17th centuries, a new National Geographic book points out. Every time you drink coffee, eat a three-course meal, get a whiff of your favorite perfume, take shelter in an earthquake-resistant structure, get a broken bone set or solve an algebra problem, it is in part due to the discoveries of Muslim civilization.

The society's often overlooked achievements are shared in **1001 INVENTIONS: The Enduring Legacy of Muslim Civilization** (National Geographic; ISBN 978-1-4262-0934; on sale Feb. 28, 2012; \$28), the companion book to the blockbuster exhibition "1001 Inventions," currently at the California Science Center in Los Angeles and opening at the National Geographic Museum in Washington, D.C., in June 2012.

Many of the most important scientific and technological discoveries and building blocks of modern civilization came out of Muslim society during the centuries after the fall of ancient Rome — a period known as the Dark Ages in European civilization. But while the Western World was in the doldrums, a renaissance was occurring in the Muslim world. The book highlights these outstanding achievements and the people behind them. For example:

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- The House of Wisdom (eighth-14th century), an immense scientific academy in Baghdad where an impressive collection of worldly knowledge was accumulated and developed, was an unrivaled center for the study of humanities and science.
- Jabir ibn Hayyan (722-815), known as the father of chemistry, worked in Iraq devising and perfecting the processes of sublimation, distillation, crystallization, purification, oxidation, evaporation filtration and others. He discovered processes for the preparation of hair dyes, leather and illuminating manuscript ink.
- Al-Zahrawi (936-1013), a physician and surgeon from Muslim Spain, wrote a 30-volume medical encyclopedia, giving detailed accounts of dental, pharmaceutical and surgical practices. He designed more than 200 surgical instruments such as syringes, droppers, scalpels and forceps. His book also described dyes that turned blond hair black, lotions for straightening curls and suntan lotion.
- Al-Jazari (12th century) was a highly skilled engineer from southern Turkey whose connecting rod system revolutionized the concept of automatic machines, including the Elephant Clock — a symbol of status that incorporated robotics with moving, time-telling figures.
- Ibn Nafis (1210-1288), a famous philosopher and physician who was born in Syria and lived in Egypt, was the first to describe pulmonary circulation of venous blood passing into the heart and lungs via the ventricles. He was finally credited with this discovery in the early 20th century when his manuscript was discovered in Berlin.
- Sinan (1489-1588) was the master architect for the Ottoman Empire. He designed and built 477 buildings during his long career in the service of three sultans in Turkey. His work includes the Selimiye Mosque in Edirne, which has the highest, most earthquake-defying minarets in all of Turkey. His designs revolutionized the dome, allowing for greater height and size.

The book's seven chapters, "Home," "School," "Hospital," "Market," "Town," "World" and "Universe," are richly illustrated and provide insight into the everyday life of early Muslim civilization and the related and subsequent Western growth. There is also an extensive reference section, a glossary of subjects and people, charts, timelines and maps illustrating the inventions and contributions, remarkable photographs, artifacts, historic documents and drawings.

The book releases in conjunction with the globally renowned "1001 Inventions" exhibition, which will be on display at National Geographic headquarters from June 6, 2012, to Jan. 6, 2013. The exhibition completed its record-breaking residency at London's Science Museum with 400,000 visitors in the first half of 2010, followed by a blockbuster residency at the historic Sultan Ahmed Square in Istanbul, the New York Hall of Science and Abu Dhabi. The exhibition is now at the California Science Center in Los Angeles, where, due to its popularity, it has been extended 10 weeks to March 11, 2012.

**Salim T.S. Al-Hassani**, chief editor for the book, is emeritus professor of mechanical engineering at the University of Manchester, United Kingdom, where he is also a professorial fellow in the School of Languages, Linguistics, and Cultures. He has been awarded numerous grants, published more than 200 papers in international journals and books and been the recipient of many prizes. In 1999, Al-Hassani founded the Foundation for Science, Technology and Civilisation (FSTC), a not-for-profit academic organization supported by a global network of historians of science, which supported the creation of 1001 Inventions. 1001 Inventions is now a world-renowned, award-winning educational brand whose exhibitions, films, books and educational materials have reached more than 50 million people around the world. The groundbreaking education film "1001 Inventions and the Library of Secrets," featuring award-winning actor Sir Ben Kingsley, has been downloaded more than 20 million times and won Best Film awards in Cannes, London and Los Angeles and at the New York Film Festival.

Al-Hassani was raised in Baghdad and has lived in the United Kingdom for more than 50 years. In 2009, he was honored by becoming the 83rd honorary fellow of the British Science Association.

**About 1001 Inventions**

1001 Inventions was launched in 2006 with support from the Foundation for Science, Technology and Civilisation (FSTC), a British-based international network of world-renowned historians. The global strategic partner for 1001 Inventions is Abdul Latif Jameel Community Initiatives. In 2011, 1001 Inventions entered into a strategic partnership with National Geographic Al-Arabiyah magazine to bring its educational materials to a wider audience in the Middle East. A bilingual Arabic-English version of the "1001 Inventions" exhibition was launched in November 2011 in the United Arab Emirates.

For further information about 1001 Inventions (images, video, etc.), email [info@1001inventions.com](mailto:info@1001inventions.com).



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