Ted Themelis
Expert on Corundum enhancement
Greek-American
泰德.塞梅利斯
剛玉熱處理專家
希臘—美國

Ted Themelis received his Bachelor of Science degree from the City University of New York in 1975. He has worked extensively in development, engineering, and manufacturing of innovative gemological testing instruments and apparatuses.

Since 1979, he has been involved in various experimental gemstone enhancement projects, primarily in the heat treatment of ruby/sapphire. He has traveled extensively, to the most inaccessible gem mining areas in Burma, Sri Lanka, Thailand, Vietnam, Pakistan, India, Afghanistan, Nepal, Tanzania, Kenya, S. Africa, Venezuela, Colombia, Brazil, China, and elsewhere. From 1984-1986, he served as Director of Research & Development of the Accredited Gemologists Association in the USA.

He has published over 120 articles on gem identification, instrumentation, treatments, inclusions, and other subjects. In 1995 he produced the first electric resistance 1800° C furnace on the market, using $MoSi_2$ 1900℃ heating elements with full atmospheric control, specifically designed for the heat-treatment of ruby and sapphire. He maintains state-of-the-art gemstone enhancement laboratories in Europe, Thailand, and in the USA, providing heat treatment technology, equipment, and services to the gem and jewelry industry.

泰德.西梅利斯先生自1975年從紐約市大學取得理學學士學位後，發展的領域擴及工程開發，並創造新的寶石檢測儀器和設備製造。

自1979年以來，他已經參與了多項優化寶石的專案項目，主要是在紅寶與藍寶石的熱處理。遊歷廣泛的他更是足踏緬甸、斯里蘭卡、泰國、越南、巴基斯坦、印度、阿富汗、尼泊爾、坦尚尼亞、肯亞、南非、委內瑞拉、哥倫比亞、巴西、中國、等各寶石產地裡最偏遠的地區。從1984年至1986年間，他還擔任美國寶石協會認可的研發總監。

他已發表超過120篇有關寶石鑑定、儀器、處理、包裹體，和其他科目的學術論文。1995年生產上市第一台專門為紅寶與藍寶石熱處理所設計，耐熱1800℃的電阻熔爐，使用$MoSi_2$二硅化鉬可達1900℃的加熱元件並能完全控制大氣壓力。泰德先生致力於歐洲、泰國以及美國幾處針對優化處理科技發展領先的寶石實驗室，為寶石和珠寶產業提供先進的熱處理技術、設備和服務。

GEMLAB - P.TEERAKANONT, Bangkok 10120, Thailand
TEL 電話: (66+2) 676-4851
FAX 傳真: (66+2) 676-3226
MOBILE (Bangkok)曼谷行動電話:: (089) 074-4150
e-mail電郵: gemlab@themelis.com, WEBSITE網址: www.themelis.com

Research on Cobalt-Infused Lead-Glass-Filled Blue Sapphires

Ted Themelis

鈷注入鉛玻璃充填藍寶石的研究

泰德. 塞梅利斯

Abstract:

An account on the heating process of certain types of whitish opaque to semi-opaque sapphires heat-treated with lead glass, cobalt, and other additives to produce artificially colored transparent to translucent blue sapphires due to cobalt additive: Description, characterization, methodology, identification, market considerations, disclosure and other issues. In this article the *"Cobalt-Infused Lead-Glass-Filled Blue Sapphires"* are simply referred to as *"Co+Pb sapphires*" and the related heat-treating processes as "Co+Pb process".

摘要：

某些從不透明到半透明的帶白色調藍寶類型，用來施以含有鉛玻璃、鈷和其他添加劑以致人工著色透明到半透明的藍寶石的熱處理程序，這類鈷添加劑的描述、特性、方法、鑑定、市場考量、信息披露等其他問題。在這篇"鈷注入鉛玻璃充填藍寶石的研究" 文章中做整理的介紹，文中簡稱為"鈷+鉛藍寶" 及相關熱處理過程稱"鈷+鉛工序"。