

PROSPECTS OF THE
INTERNATIONALIZATION OF FEI CUI
JEWELLERY TEST CERTIFICATE

GAHK SEMINAR
17. SEPTEMBER 2016

GÜBELIN GEM LAB
LUCERNE - HONG KONG - NEW YORK



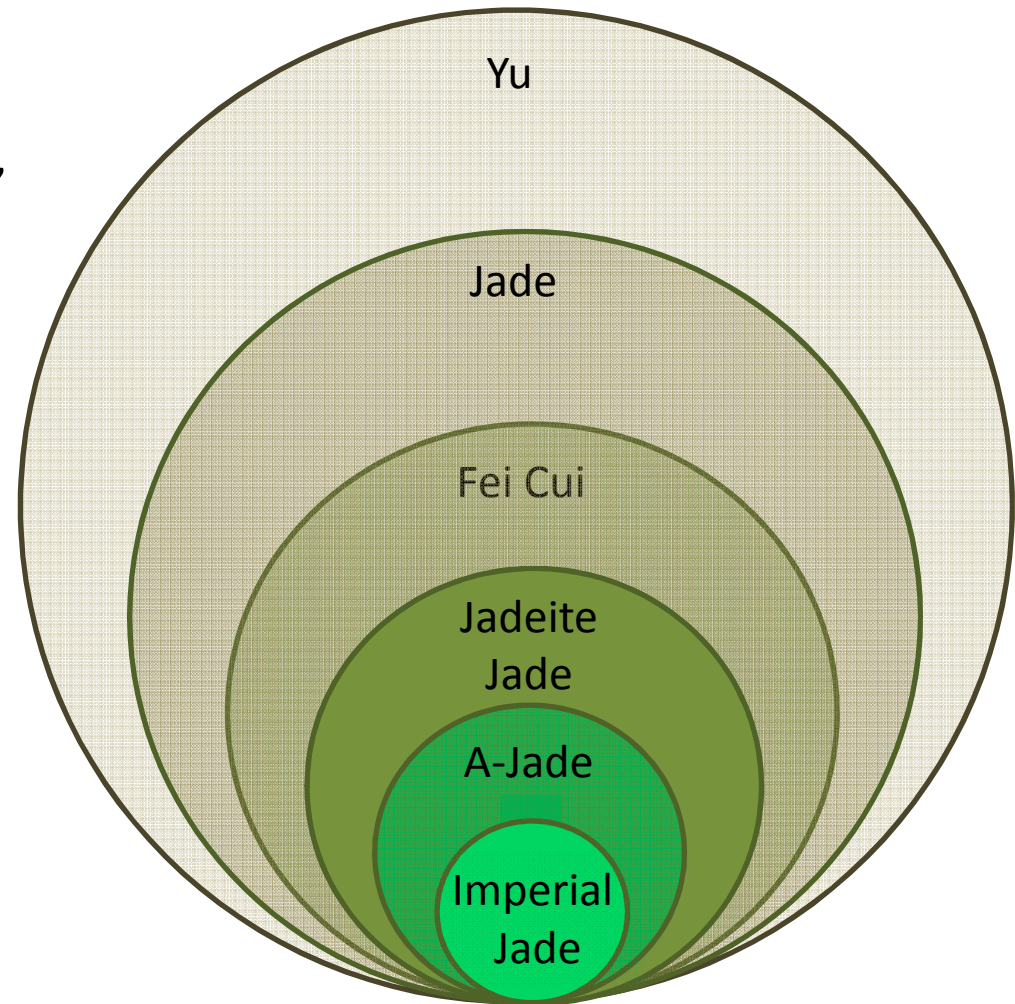
PROSPECTS OF THE INTERNATIONALIZATION OF FEI CUI JEWELLERY TEST CERTIFICATE WHY DOES IT MATTER?

- Values of high-quality gemstones increased significantly over the last 10 - 20 years
- Testing and certification has gained importance: more sales involve a lab report
- The gemstone trade has become a global affair: high-value pieces are sold on global platforms
- Free access to information has smoothened local price differences



BACKGROUND: FEI CUI IN THE LARGER CONTEXT

- **Yu**
- **Jade:** Jadeite jade, omphacite jade, kosmochlore jade and nephrite jade
- **Fei Cui:** Jadeite jade, omphacite jade, kosmochlore jade
- **Jadeite Jade**
- **A-Jade (Type A):** Untreated Fei Cui
- **Imperial Jade:** Untreated, emerald-green jadeite jade of superior quality



DIFFERENT VIEWS TO FEI CUI HISTORY / CULTURE

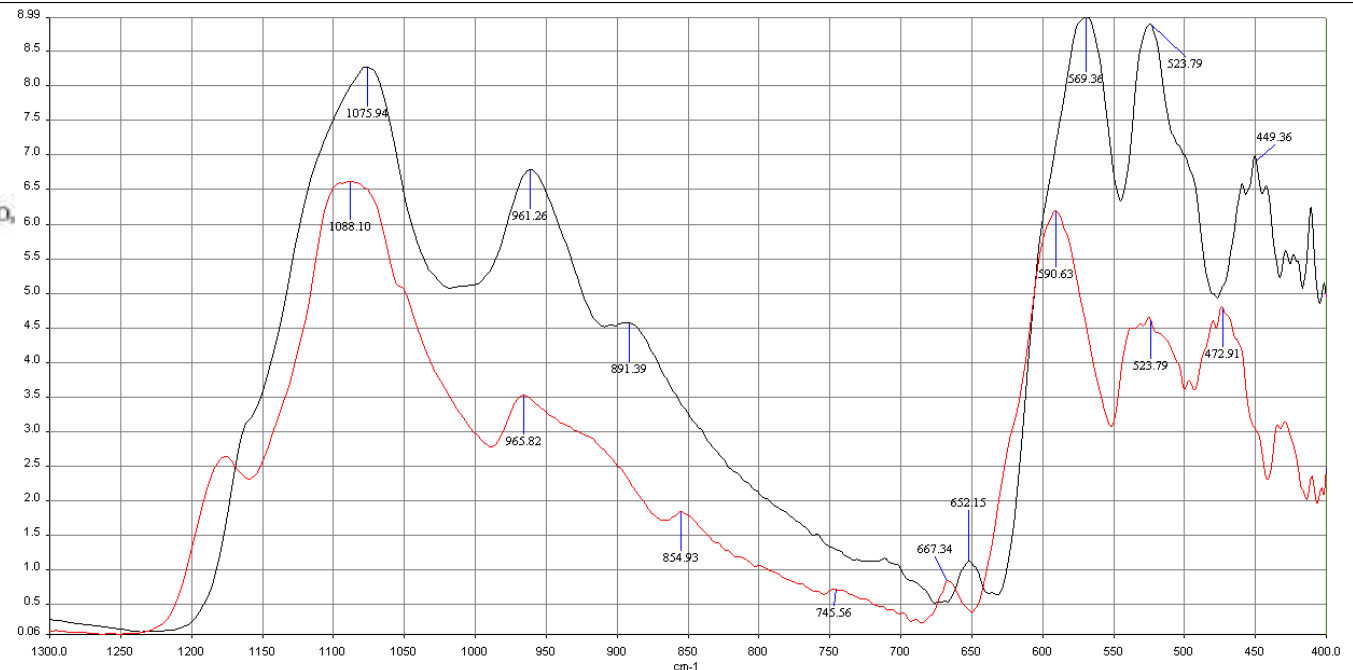
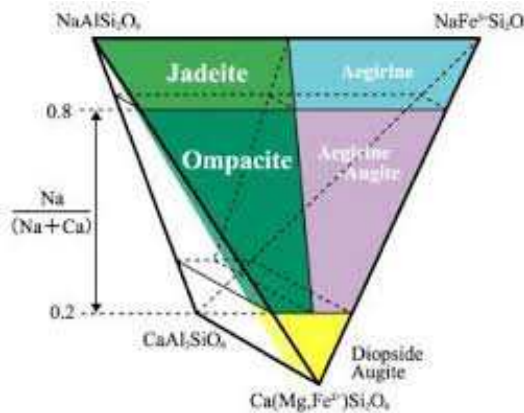
- Virtues: fine texture, toughness, hardness, luster, translucency
- Tradition, Symbolism, Protection
- History: nephrite vs. jadeite
- Geography: Chinese vs Japanese terminology
- Fashioning: Cabochons, beads, bangles, carvings



DIFFERENT VIEWS TO FEI CUI SCIENCE

- Standards, consistency
- Species & variety
- Colour, homogeneity
- Transparency, translucency
- Toughness & hardness
- Texture, Lustre
- Treatments

Science



DIFFERENT VIEWS TO FEI CUI TRADE / VALUE

- Mining
- Trading rough, boulders
- Evaluation, sawing
- Polishing, carving
- Treatments
- Lab testing
- Jewellery manufacturing

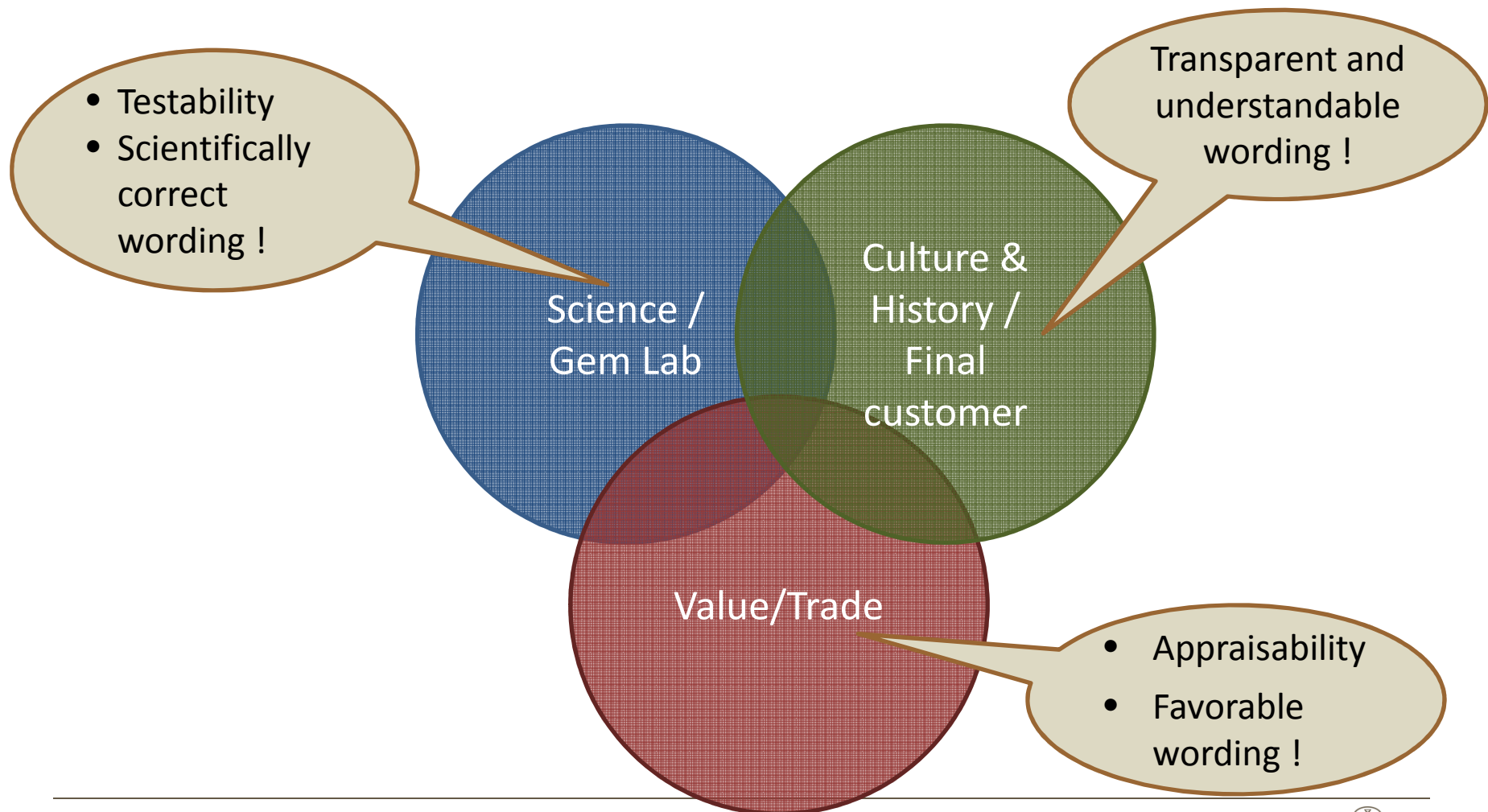
Trade /
Value



Photo: Hpone Phyto, Gübelin Gem Lab

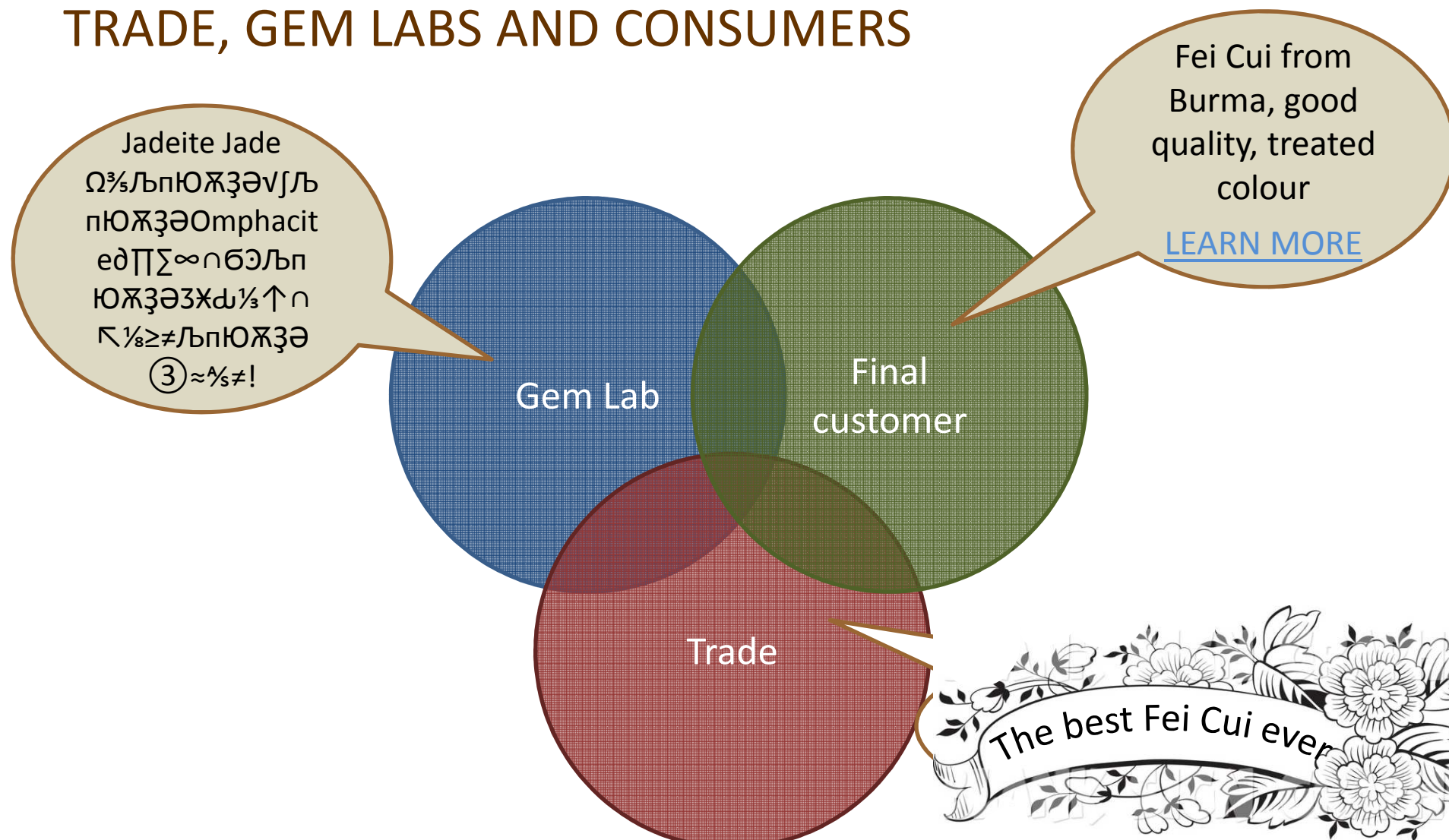
FEI CUI TERMINOLOGY: SPECIFIC & COMMON INTERESTS

HOW TO COMBINE THE DIFFERENT VIEWS OF THE TRADE, GEM LABS AND CONSUMERS



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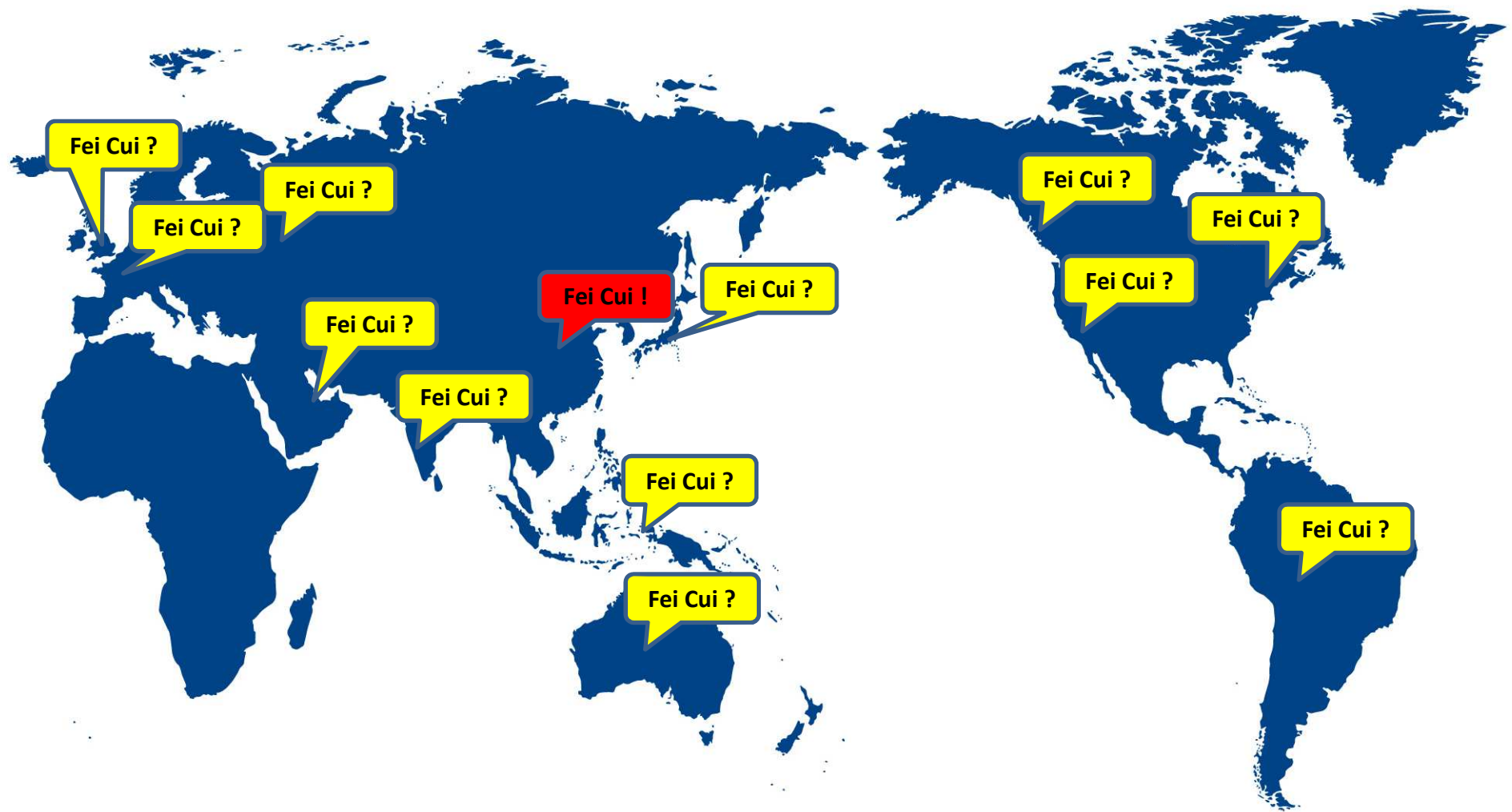


INTERNATIONALISATION: WHAT IS NEEDED TO
MAKE IT A SUCCESS

萬丈高樓平地起

博觀而約取, 厚積而薄發





INTERNATIONALISATION OF FEI CUI TEST CERTIFICATES

GOAL: CREATE AWARENESS AND ACCEPTANCE OF THE TERM AND MEANING OF FEI CUI

Prerequisites: Standardisation:

1. Standardise the definition
2. Standardise the testing
 - Analytical equipment
 - Application of analytics (processes, calibration)
 - Testing protocols (Standard Operating Procedures, SOP)
 - Data processing
 - Evaluation
 - Interpretation
3. Standardise the wording on lab reports
4. Communication

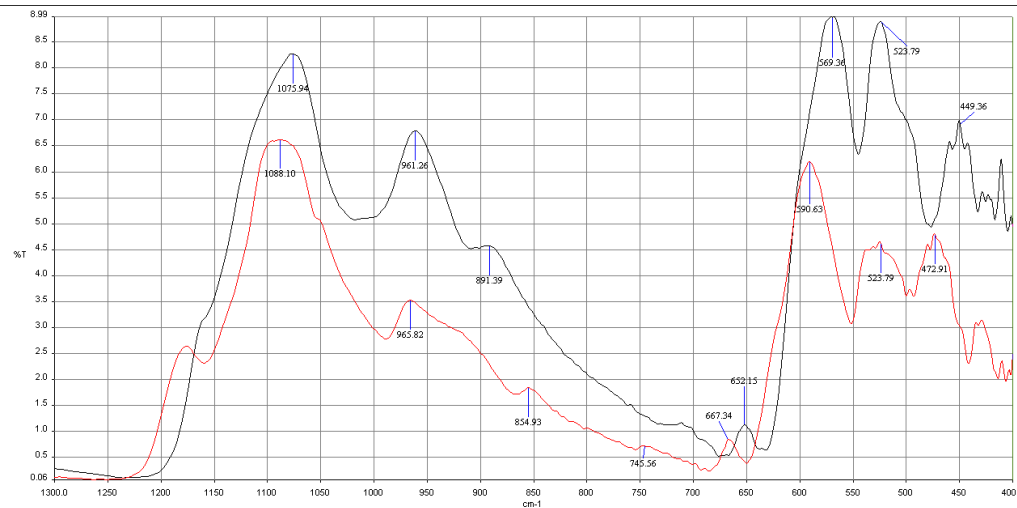
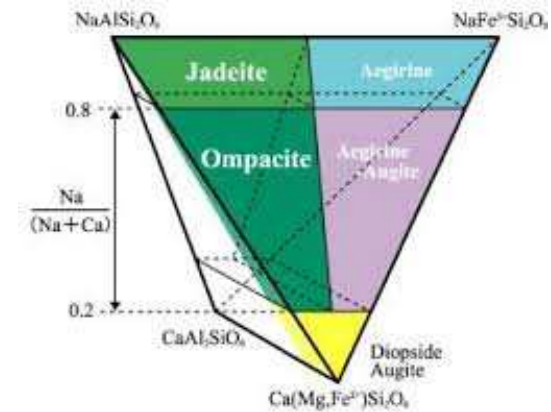


©: Christie's

INTERNATIONALISATION OF FEI CUI TEST CERTIFICATES

1. PREREQUISITES: STANDARDISE THE DEFINITION

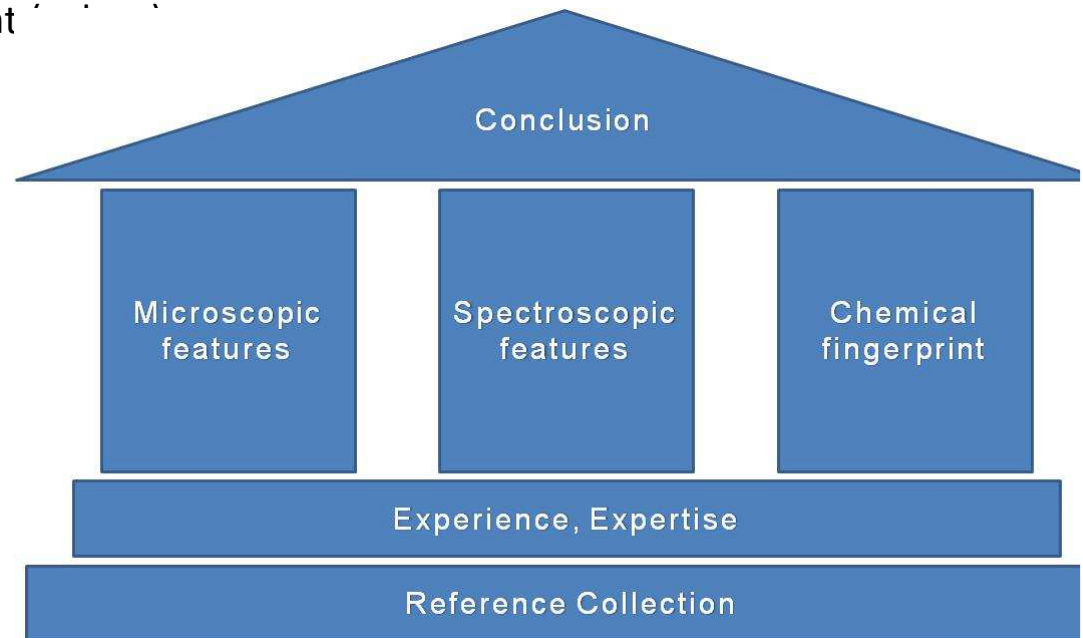
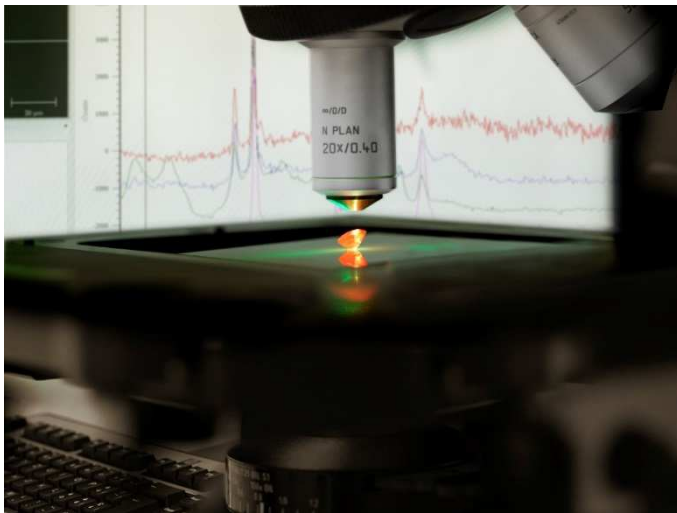
- Which minerals? Pure minerals vs. mixtures?
- Which colours are included / excluded?
- Are all possible treatments acceptable?
- Which qualities?
- Which origins?



INTERNATIONALISATION OF FEI CUI TEST CERTIFICATES

2. PREREQUISITE: STANDARDISE THE TESTING

- Standard analytical equipment:
 - **Microscopy**: detailed visual assessment (magnification)
 - Other basic gemmological tests (e.g. RI, SG, fluorescence lamp)
 - **FT-IR spectroscopy**: testing identity and treatment (impregnation)
 - **UV-Vis spectroscopy**: testing treatment
- Additional equipment:
 - **Raman spectroscopy** for testing identity and treatment (impregnation)
 - **ED-XRF** for testing identity




INTERNATIONALISATION OF FEI CUI TEST CERTIFICATES

2. PREREQUISITE: STANDARDISE THE TESTING

- Application of analytics (processes, calibration)
- Testing protocols (Standard Operating Procedures, SOP)

Recommended Reading:

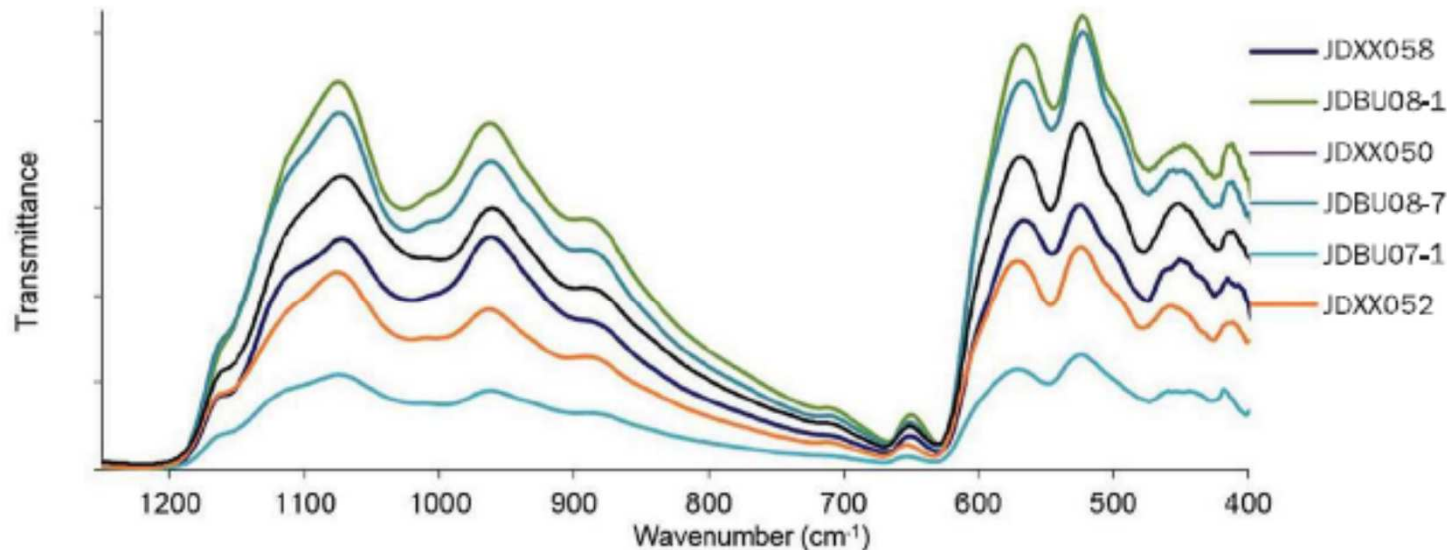
- Kan-Nyunt, H.P. (2013). Burmese Jade Update. Jewellery News Asia, 349, pp. 174–178
- Kan-Nyunt, H.P. et al (2014). The Use of FT-IR and Raman Spectroscopy in the Testing of Fei Cui. Journal of GAHK, Vol. XXXV, pp. 29-38

 GÜBELIN GEM LAB		SOP - No.: 170
<h2>Standard Operating Procedure</h2>		
Title: Jade Analysis		
Aim: Detailed description of how to perform the analytical work for jadeite jade, omphacite jade, kosmochlor, nephrite jade and serpentine		
Scope: Jade identification	Signatures: Written:..... Name: Bonita Kwok Function: Controlled:..... Name: Hpone Phyoo Function: Approved:..... Name: Lore Kiefert Function:	
Valid as of: 27th September 2011		
Replaces SOP from: 1 st November 2006		
Distribution: GGL		
SOP Responsibility: Bonita Kwok		

INTERNATIONALISATION OF FEI CUI TEST CERTIFICATES

2. PREREQUISITE: STANDARDISE THE TESTING

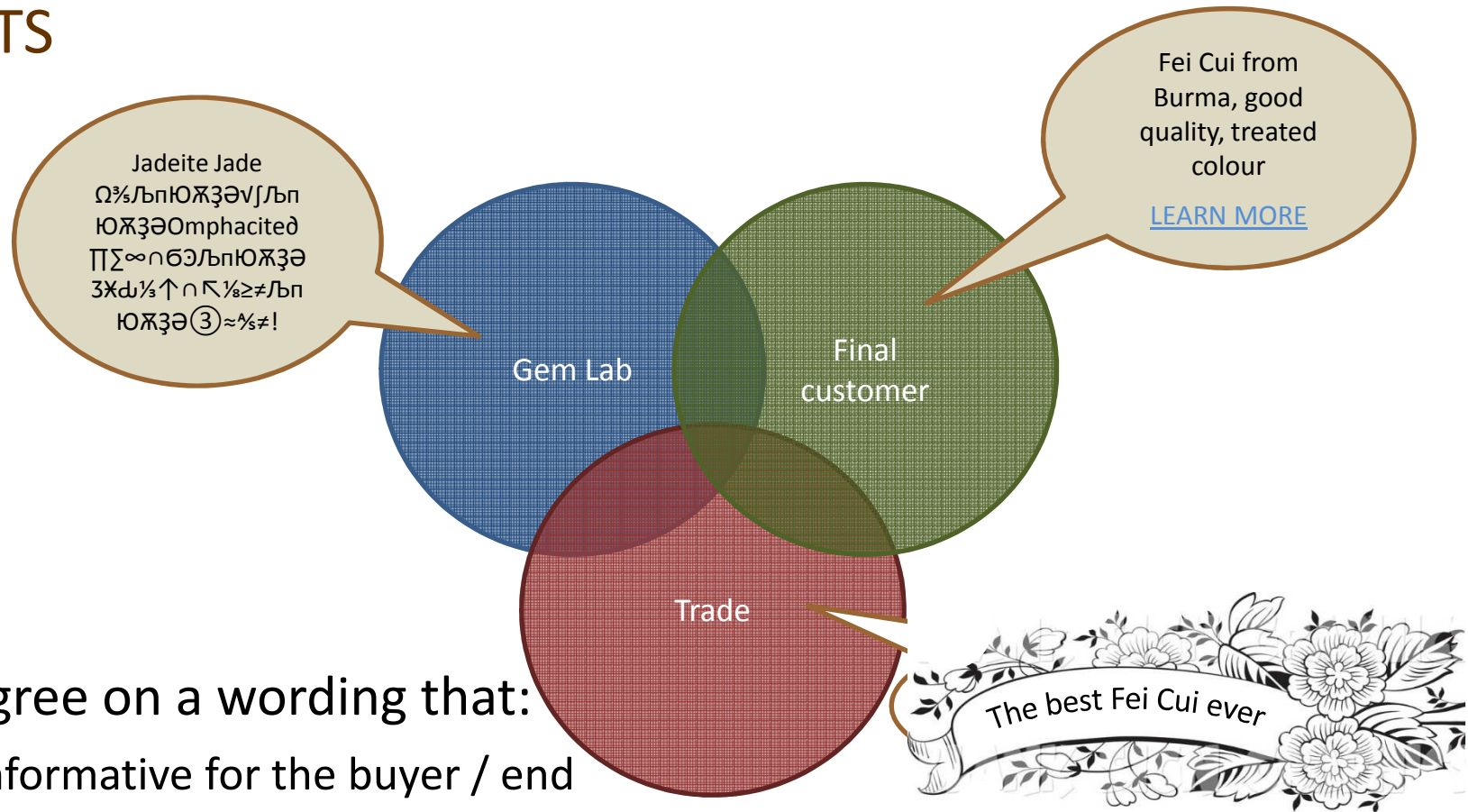
- Data processing
 - Evaluation
 - Interpretation
- Identification
Treatment
Origin !



Graph 2. Unpolarised overlay FTIR spectra of omphacites. JDXX058 is the “purest” omphacite spectrum

INTERNATIONALISATION OF FEI CUI TEST CERTIFICATES

3. PREREQUISITE: STANDARDISE THE WORDING ON LAB REPORTS



- Crux: agree on a wording that:
 - is informative for the buyer / end consumer
 - is clear and complete
 - helps selling the stone



GEMMOLOGICAL REPORT

Report Number
Specimen_030 / 1 and 2

Date
9 September 2016

Item
Two polished gemstones (unmounted
for testing) set in a pair of ear clips

Weight
1) 18.28 ct
2) 18.18 ct

Shape
round

Cut
cabochon

Measurements
1) 18.80 - 18.90 x 3.88 mm
2) 18.20 - 18.60 x 3.68 mm

Transparency
transparent to translucent

Colour
green

Identification
Natural jadeite jade

Condition
No indications of treatment (Type
A).

Comments
This type of jadeite jade may also be
called "Fei Cui" in the trade.

Important notes and limitations on the reverse.



Hpone-Phyo Kan-Nyunt



Bonita Kwok



报告
Specimen_030 / 1 和 2

日期
2016/09/12

物品
两件已抛光的宝石(无镶嵌下进行
测试)镶嵌在一对耳夹上

重量
1) 18.28 ct
2) 18.18 ct

形状
圆形

切割
弧面型

尺寸
1) 18.80 - 18.90 x 3.88 mm
2) 18.20 - 18.60 x 3.68 mm

透明度
透明至半透明

颜色
绿色

宝石鉴别
天然硬玉

状况
无显示有处理 (A货)。

意见
在行业内，此硬玉也可称为「翡翠」。

INTERNATIONALISATION OF FEI CUI TEST CERTIFICATES

4. COMMUNICATION

- Marketing, lobbying
- Reviewing, finetuning, harmonising



THANK YOU

GÜBELIN GEM LAB
LUCERNE - HONG KONG - NEW YORK

